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Department
Agriculture

Federal
Grain
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Service

1993 U.S. Grain Exports: Quality Report

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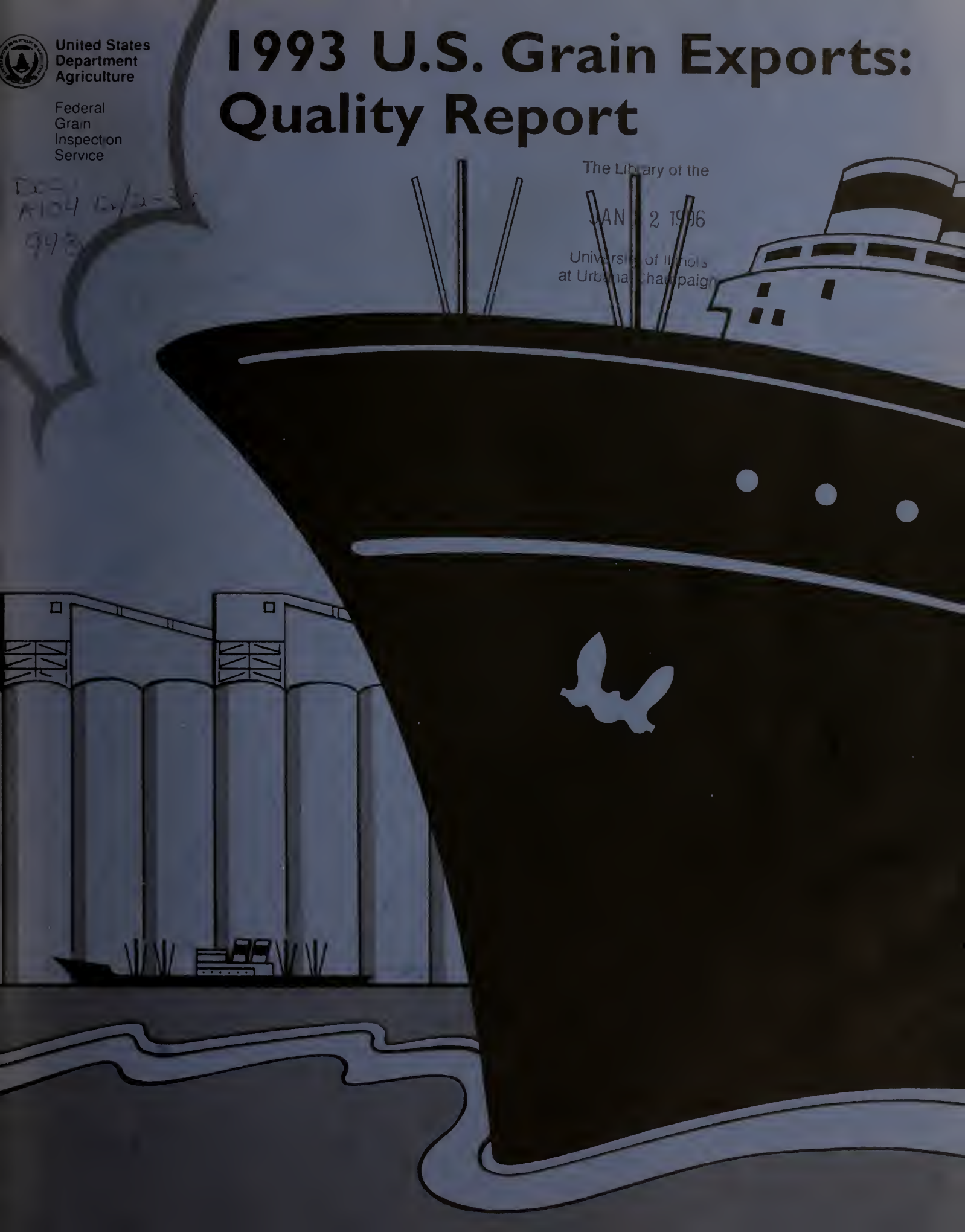


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Introduction

The *1993 U.S. Grain Exports: Quality Report* is the result of efforts by the U.S. Department of Agriculture's Federal Grain Inspection Service (FGIS) to determine, document, and disseminate critical information regarding U.S. export grain quality.

The 1993 report is the tenth edition of this annual summary of export grain quality. The report summarizes the quality of export wheat, corn, soybeans, sorghum, barley, sunflower seeds, oats, canola, and mixed grain. Flaxseed and rye are not included in this year's report; no lots have been reported in the past 3 years.

Organization of the Report

The report contains chapters addressing export wheat, export corn, export soybeans, and other grains. Each chapter contains:

- * standards and definitions for each grain, and
- * tables that clearly illustrate all factor result averages at each applicable U.S. grade level.

Methodology

FGIS collects and documents information about export grain shipments in the automated Export Grain Information System (EGIS). This system contains one record for each export lot inspected. In the case of some railcar exports, each record may contain information from several lots which were aggregated to simplify internal reporting.

Generally, each EGIS record contains the quantity of the lot and the average factor results certified for the lot. The tables in this report contain descriptive statistics which summarize these lot quantities and averages. Factor results from some export grain shipments, e.g., many railcar lots to Mexico, are not available to FGIS. Where appropriate, tables are provided which show the number of lots and the quantity of grain which was used to generate the descriptive statistics.

Many of the tables summarize factor averages by grade. A U.S. grade is determined by analyzing the physical and biological factors present in the sample. Limits for the grading factors are established for each numerical grade. Grades range from U.S. No. 1 (highest) to U.S. Sample grade (lowest). When a particular grade is cited in this report, it includes lots certified at that grade plus lots certified with the "or better" designation. For example, U.S. No. 2 grade includes lots which were certificated as "U.S. No. 2" and lots certificated as "U.S. No. 2 or better." Factors that exceed the established limits, except for test weight, lower the grade. The established limits for test weight represent minimum requirements for each grade.

This report does not contain data on the volume of export grain in bushels. Listed below are the equations for converting the approximate quantity of grain from metric tons to bushels.

Conversion Equation

$$\text{Busheis} = \frac{\text{Metric Tons} \times 2204.623 \text{ Pounds}}{\text{Legal Test Weight/Bushel of Grain}}$$

Legal Test Weight Per Bushel for Specific Grains

Wheat =	60 pounds/bushel
Corn =	56 pounds/bushel
Soybeans =	60 pounds/bushel
Sorghum =	56 pounds/bushel
Barley =	48 pounds/bushel
Sunflower Seed =	28 pounds/bushel
Rye =	56 pounds/bushel
Oats =	32 pounds/bushel

Export Wheat

Wheat Grades and Grade Requirements

Wheat is divided into eight classes: Hard Red Spring wheat, Hard Red Winter wheat, Soft Red Winter wheat, Durum wheat, Hard White wheat, Soft White wheat, Unclassed wheat, and Mixed wheat. The classes Hard Red Spring wheat, Soft White wheat, and Durum wheat are further divided into subclasses. There are no subclasses in the classes Hard Red Winter wheat, Soft Red Winter wheat,

Hard White wheat, Unclassed wheat, and Mixed wheat. Each class and subclass is divided into five U.S. numerical grades and U.S. Sample grade. Special grades are provided to emphasize special qualities or conditions affecting the value of wheat. Special grades are added to and made a part of the grade designation. They do not affect the numerical or Sample grade designation.

U.S. Standards for Wheat -- Effective January 1 - April 30, 1993*

Grade	Minimum limits of --		Maximum limits of --						
	Test weight per bushel		Damaged kernels		Foreign Material	Shrunken and broken kernels	Defects ³ (total)	Wheat of other classes ⁴	
	Hard Red Spring wheat or White Club wheat ¹ (pounds)	All other classes and subclasses (pounds)	Heat-damaged kernels (percent)	Total ² (percent)				Contrasting classes (percent)	Total ⁵ (percent)
U.S. No. 1	58.0	60.0	0.2	2.0	0.5	3.0	3.0	1.0	3.0
U.S. No. 2	57.0	58.0	0.2	4.0	1.0	5.0	5.0	2.0	5.0
U.S. No. 3	55.0	56.0	0.5	7.0	2.0	8.0	8.0	3.0	10.0
U.S. No. 4	53.0	54.0	1.0	10.0	3.0	12.0	12.0	10.0	10.0
U.S. No. 5	50.0	51.0	3.0	15.0	5.0	20.0	20.0	10.0	10.0
U.S. Sample grade									

U.S. Sample grade is wheat that:

- Does not meet the requirements for the grades U.S. Nos. 1, 2, 3, 4, or 5; or
- Contains 32 or more insect-damaged kernels per 100 grams of wheat, or
- Contains 8 or more stones or any number of stones which have an aggregate weight in excess of 0.2 percent of the sample weight, 2 or more pieces of glass, 3 or more crotalaria seeds (*Crotalaria* spp.), 2 or more castor beans (*Ricinus communis* L.), 4 or more particles of an unknown foreign substance(s) or a commonly recognized harmful or toxic substance(s), 2 or more rodent pellets, bird dropping, or an equivalent quantity of other animal filth per 1,000 grams of wheat; or
- Has a musty, sour, or commercially objectionable foreign odor (except smut or garlic odor); or
- Is heating or otherwise of distinctly low quality.

¹ These requirements also apply when Hard Red Spring or White Club wheat predominates in a sample of Mixed wheat.

² Includes heat-damaged kernels.

³ Defects include damaged kernels (total), foreign material, and shrunken and broken kernels. The sum of these three factors may not exceed the limit for defects for each numerical grade.

⁴ Unclassed wheat of any grade may contain not more than 10.0 percent of wheat of other classes.

⁵ Includes contrasting classes.

U.S. Standards for Wheat -- Effective May 1 - December 31, 1993

Grade	Minimum limits of --		Maximum limits of --						
	Test weight per bushel		Damaged kernels		Foreign Material	Shrunken and broken kernels	Defects ³ (total)	Wheat of other classes ⁴	
	Hard Red Spring wheat or White Club wheat ¹ (pounds)	All other classes and subclasses (pounds)	Heat-damaged kernels (percent)	Total ² (percent)				Contrasting classes (percent)	Total ⁵ (percent)
U.S. No. 1	58.0	60.0	0.2	2.0	0.4	3.0	3.0	1.0	3.0
U.S. No. 2	57.0	58.0	0.2	4.0	0.7	5.0	5.0	2.0	5.0
U.S. No. 3	55.0	56.0	0.5	7.0	1.3	8.0	8.0	3.0	10.0
U.S. No. 4	53.0	54.0	1.0	10.0	3.0	12.0	12.0	10.0	10.0
U.S. No. 5	50.0	51.0	3.0	15.0	5.0	20.0	20.0	10.0	10.0
U.S. Sample grade									

U.S. Sample grade is wheat that:

- Does not meet the requirements for the grades U.S. Nos. 1, 2, 3, 4, or 5; or
- Contains 32 or more insect-damaged kernels per 100 grams of wheat, or
- Contains 4 or more stones or any number of stones which have an aggregate weight in excess of 0.1 percent of the sample weight, 1 or more pieces of glass, 3 or more crotalaria seeds (*Crotalaria* spp.), 2 or more castor beans (*Ricinus communis* L.), 4 or more particles of an unknown foreign substance(s) or a commonly recognized harmful or toxic substance(s), 2 or more rodent pellets, bird dropping, or an equivalent quantity of other animal filth, five or more pieces of animal filth, castor beans, crotalaria seeds, glass, stones, or unknown foreign substances, in combination, per 1,000 grams of wheat; or
- Has a musty, sour, or commercially objectionable foreign odor (except smut or garlic odor); or
- Is heating or otherwise of distinctly low quality.

¹These requirements also apply when Hard Red Spring or White Club wheat predominates in a sample of Mixed wheat.

² Includes heat-damaged kernels.

³Defects include damaged kernels (total), foreign material, and shrunken and broken kernels. The sum of these three factors may not exceed the limit for defects for each numerical grade.

⁴Unclassed wheat of any grade may contain not more than 10.0 percent of wheat of other classes.

⁵Includes contrasting classes.

Definitions

Test weight (lb/bu) is pounds of grain per Winchester bushel.

Test weight (kg/hl) is the metric system equivalent to pounds per bushel. Kilograms per hectoliter are calculated by multiplying pounds per bushel by 1.287.

Heat-damaged kernels are kernels, pieces of wheat kernels, and other grains which have been materially discolored and damaged by heat.

Damaged kernels (total) are kernels, pieces of wheat kernels, and other grains that are badly ground-damaged, badly weather-damaged, diseased, frost-damaged, heat-damaged, insect bored, mold-damaged, sprout-damaged, or otherwise materially damaged.

Foreign material is all matter other than wheat which remains in a sample after removal of dockage and shrunken and broken kernels.

Shrunken and broken kernels are kernels, kernel pieces, and other matter that pass through a 0.064-by 3/8-inch oblong-hole sieve.

Total defects are the sum of three factors: damaged kernels (total), shrunken and broken kernels, and foreign material. In the factor summary tables, the average values listed for total defects may not equal the sum of the component factor averages due to rounding.

Dockage includes chaff, dust, and items removed from a sample by an initial screening with a dockage tester. The percentage of dockage in a sample does not affect the numerical grade.

Moisture is the water content of grain as determined by an approved electronic moisture meter. The percentage of moisture in a sample does not affect the numerical grade.

Contrasting classes include:

- * Durum, Hard White, Soft White, and Unclassed wheats in the classes Hard Red Spring and Hard Red Winter wheats.
- * Hard Red Spring, Hard Red Winter, Hard White, Soft Red Winter, Soft White, and Unclassed wheats in the class Durum wheat.
- * Durum and Unclassed wheats in the class Soft Red Winter wheat.
- * Durum, Hard Red Spring, Hard Red Winter, Soft Red Winter and Unclassed wheats in the classes Hard White wheat and Soft White wheat.

Wheat of other classes is any class that is mixed with the predominant class.

Protein is the protein content of grain as determined by an approved near infrared spectroscopy (NIRS) instrument calibrated against a Kjeldahl method (percent nitrogen multiplied by 5.7). The percentage of protein in a sample does not affect the numerical grade. Protein is certified on a 12 percent moisture basis.

Mixed wheat is a combination of classes of wheat which does not meet the minimum requirements of a specific class.

Table 1. U.S. Wheat Exports: Number of lots and quantity exported by class and grade, 1991-93

Class	Grade	1991		1992		1993	
		Number of Lots	Metric Tons	Number of Lots	Metric Tons	Number of Lots	Metric Tons
Hard Red Winter Wheat	U.S. No. 1	84	738,940	87	668,866	111	836,502
	U.S. No. 2	530	12,259,351	541	12,103,399	739	13,205,517
	U.S. No. 3	2	2,284	--	--	3	27,028
	U.S. No. 5	--	--	--	--	1	8,990
	U.S. Sample Grade	--	--	--	--	6	164,687
	All lots	616	13,000,575	628	12,772,265	860	14,242,724
Hard Red Spring Wheat	U.S. No. 1	101	782,875	88	710,190	136	943,039
	U.S. No. 2	503	7,050,121	576	9,629,904	688	9,417,021
	U.S. No. 3	3	7,229	2	6,989	7	8,230
	All lots	607	7,840,225	666	10,347,083	831	10,368,290
Soft Red Winter Wheat	U.S. No. 1	--	--	2	730	--	--
	U.S. No. 2	229	4,094,842	219	4,693,945	231	3,936,502
	U.S. No. 3	5	37,748	2	4,402	8	123,243
	U.S. No. 4	--	--	1	1,000	8	226,495
	U.S. No. 5	1	11,535	--	--	5	38,927
	U.S. Sample Grade	--	--	1	112	6	119,690
	All lots	235	4,144,125	225	4,700,189	258	4,444,857
Durum Wheat	U.S. No. 1	4	42,866	14	145,301	25	300,469
	U.S. No. 2	45	228,351	54	298,629	78	516,047
	U.S. No. 3	65	916,004	48	712,238	41	517,382
	All lots	114	1,187,221	116	1,156,168	144	1,333,898
Soft White Wheat	U.S. No. 1	122	839,266	113	700,413	131	727,841
	U.S. No. 2	321	5,000,706	292	4,809,422	262	4,592,411
	U.S. No. 3	--	--	--	--	1	2,200
	U.S. No. 4	--	--	--	--	1	25,665
	U.S. No. 5	--	--	--	--	5	58,610
	All lots	443	5,839,972	405	5,509,835	400	5,406,727
Hard White Wheat	U.S. No. 2	1	900	1	250	--	--
	All lots	1	900	1	250	--	--

continued

Table 1. U.S. Wheat Exports: Number of lots and quantity exported by class and grade, 1991-93--Continued

Class	Grade	1991		1992		1993	
		Number of Lots	Metric Tons	Number of Lots	Metric Tons	Number of Lots	Metric Tons
Mixed Wheat	U.S. No. 2	3	6,808	1	408	3	15,300
	U.S. No. 4	--	--	--	--	1	61,114
	U.S. No. 5	--	--	--	--	1	26,000
	U.S. Sample Grade	--	--	--	--	5	97,699
	All lots	3	6,808	1	408	10	200,113
All Classes	U.S. No. 1	311	2,403,947	304	2,225,500	403	2,807,851
	U.S. No. 2	1,632	28,641,079	1,684	31,535,957	2,001	31,682,798
	U.S. No. 3	75	963,265	52	723,629	60	678,083
	U.S. No. 4	--	--	1	1,000	10	313,274
	U.S. No. 5	1	11,535	--	--	12	132,527
	U.S. Sample Grade	--	--	1	112	17	382,076
	All lots	2,019	32,019,826	2,042	34,486,198	2,503	35,996,609

-- = No lots reported in this category.

Table 2. Summary of export Hard Red Winter wheat quality, 1991-93

Factor	Grade	1991					1992				1993			
		Grade No. of Limit	Lots	Avg.	Low	High	No. of Lots	Avg.	Low	High	No. of Lots	Avg.	Low	High
Test Weight (lb/bu)	U.S. No. 1	60.0	83	62.1	60.6	64.0	77	61.9	60.2	64.1	104	61.8	60.2	64.2
	U.S. No. 2	58.0	514	61.0	8.2	63.9	492	60.7	58.2	64.0	618	60.6	58.3	64.1
	U.S. No. 3	56.0	2	60.1	57.7	61.7	--	--	--	--	2	60.4	58.9	60.4
	U.S. No. 5	51.0	--	--	--	--	--	--	--	--	1	59.6	59.6	59.6
	U.S. Sample Grade	N/A	--	--	--	--	--	--	--	--	6	59.0	58.2	60.1
	All lots	N/A	599	61.1	57.7	64.0	569	60.8	58.2	64.1	731	60.6	58.2	64.2
Test Weight (kg/hl)	U.S. No. 1	N/A	83	80.0	78.0	82.4	77	79.7	77.5	82.5	104	79.5	77.5	82.6
	U.S. No. 2	N/A	514	78.5	74.9	82.3	492	78.2	75.0	82.3	618	78.0	75.0	82.5
	U.S. No. 3	N/A	2	77.4	74.3	79.4	--	--	--	--	2	77.7	75.8	77.7
	U.S. No. 5	N/A	--	--	--	--	--	--	--	--	1	76.7	76.7	76.7
	U.S. Sample Grade	N/A	--	--	--	--	--	--	--	--	6	76.0	74.9	77.4
	All lots	N/A	599	78.6	74.3	82.4	569	78.3	75.0	82.5	731	78.1	74.9	82.6
Moisture	U.S. No. 1	N/A	83	10.1	9.1	11.3	77	11.0	9.2	12.8	104	11.6	9.7	13.1
	U.S. No. 2	N/A	514	11.2	8.8	13.3	492	11.6	8.9	13.5	618	12.1	9.5	13.4
	U.S. No. 3	N/A	2	11.9	1.0	13.4	--	--	--	--	2	12.8	12.2	12.8
	U.S. No. 5	N/A	--	--	--	--	--	--	--	--	1	12.8	12.8	12.8
	U.S. Sample Grade	N/A	--	--	--	--	--	--	--	--	6	12.6	12.4	13.0
	All lots	N/A	599	11.2	8.9	13.4	569	11.6	8.9	13.5	731	12.1	9.5	13.4
Heat-damaged Kernels	U.S. No. 1	0.2	83	0.0	0.0	0.0	77	0.0	0.0	0.0	111	0.0	0.0	0.0
	U.S. No. 2	0.2	514	0.0	0.0	0.1	492	0.0	0.0	0.1	739	0.0	0.0	0.1
	U.S. No. 3	0.5	2	0.0	0.0	0.0	--	--	--	--	3	0.0	0.0	0.0
	U.S. No. 5	3.0	--	--	--	--	--	--	--	--	1	0.0	0.0	0.0
	U.S. Sample Grade	N/A	--	--	--	--	--	--	--	--	6	0.0	0.0	0.1
	All lots	N/A	599	0.0	0.0	0.1	569	0.0	0.0	0.1	860	0.0	0.0	0.1
Damaged Kernels (Total)	U.S. No. 1	2.0	83	0.1	0.0	0.6	77	0.2	0.0	0.7	111	0.3	0.0	1.3
	U.S. No. 2	4.0	514	0.9	0.0	1.9	492	1.2	0.0	2.9	739	1.4	0.0	2.7
	U.S. No. 3	7.0	2	0.6	0.6	0.6	--	--	--	--	3	1.0	0.0	3.6
	U.S. No. 5	15.0	--	--	--	--	--	--	--	--	1	12.0	12.0	12.0
	U.S. Sample Grade	N/A	--	--	--	--	--	--	--	--	6	14.5	10.9	19.4
	All lots	N/A	599	0.8	0.0	1.9	569	1.2	0.0	2.9	860	1.5	0.0	19.4
Foreign Material	U.S. No. 1	0.5 ¹	83	0.2	0.1	0.5	77	0.2	0.1	0.5	111	0.2	0.0	0.4
	U.S. No. 2	1.0 ²	514	0.2	0.0	0.7	492	0.3	0.0	0.7	739	0.3	0.0	0.6
	U.S. No. 3	2.0 ³	2	0.4	0.4	0.5	--	--	--	--	3	0.5	0.0	0.5
	U.S. No. 5	5.0	--	--	--	--	--	--	--	--	1	0.6	0.6	0.6
	U.S. Sample Grade	N/A	--	--	--	--	--	--	--	--	6	0.7	0.2	1.1
	All lots	N/A	599	0.2	0.0	0.7	569	0.3	0.0	0.7	860	0.3	0.0	1.1

continued

Table 2. Summary of export Hard Red Winter wheat quality, 1991-93--Continued

Factor	Grade	1991					1992				1993			
		Grade No. of	No. of				No. of				No. of			
		Limit	Lots	Avg.	Low	High	Lots	Avg.	Low	High	Lots	Avg.	Low	High
Shrunken and Broken	U.S. No. 1	3.0	83	1.9	1.0	2.7	77	1.5	0.9	2.5	111	1.2	0.0	2.4
	U.S. No. 2	5.0	514	2.2	1.0	3.3	492	1.9	0.8	2.8	739	1.8	0.0	2.7
	U.S. No. 3	8.0	2	2.0	1.6	2.2	--	--	--	--	3	2.0	0.0	2.1
	U.S. No. 5	20.0	--	--	--	--	--	--	--	--	1	1.9	1.9	1.9
	U.S. Sample Grade	N/A	--	--	--	--	--	--	--	--	6	2.2	1.8	2.6
	All lots	N/A	599	2.2	1.0	3.3	569	1.9	0.8	2.8	860	1.8	0.0	2.7
Total Defects ⁴	U.S. No. 1	3.0	83	2.2	1.4	2.9	77	1.9	1.1	2.7	111	1.8	0.0	2.8
	U.S. No. 2	5.0	514	3.3	1.1	4.6	492	3.4	1.3	5.0	739	3.5	0.0	5.0
	U.S. No. 3	8.0	2	3.0	2.7	3.2	--	--	--	--	3	3.5	0.0	6.0
	U.S. No. 5	20.0	--	--	--	--	--	--	--	--	1	14.5	14.5	14.5
	U.S. Sample Grade	N/A	--	--	--	--	--	--	--	--	6	17.5	13.5	21.6
	All lots	N/A	599	3.2	1.1	4.6	569	3.4	1.1	5.0	860	3.6	0.0	21.6
Dockage	U.S. No. 1	N/A	83	0.5	0.2	0.8	77	0.6	0.3	0.9	111	0.6	0.0	1.0
	U.S. No. 2	N/A	514	0.6	0.3	1.4	492	0.7	0.4	2.9	739	0.7	0.0	3.9
	U.S. No. 3	N/A	2	.06	0.6	0.6	--	--	--	--	3	1.0	0.0	1.0
	U.S. No. 5	N/A	--	--	--	--	--	--	--	--	1	1.0	1.0	1.0
	U.S. Sample Grade	N/A	--	--	--	--	--	--	--	--	6	0.8	0.6	1.0
	All lots	N/A	599	0.6	0.2	1.4	569	0.7	0.3	2.9	860	0.7	0.0	3.9
Wheat of Other Classes	U.S. No. 1	3.0	83	0.8	0.0	2.5	77	0.9	0.0	2.9	111	1.1	0.0	2.7
	U.S. No. 2	5.0	514	2.9	0.0	5.0	492	2.7	0.0	4.9	739	1.6	0.0	5.0
	U.S. No. 3	10.0	2	7.4	7.3	7.5	--	--	--	--	3	2.5	0.0	2.5
	U.S. No. 5	10.0	--	--	--	--	--	--	--	--	1	7.0	7.0	7.0
	U.S. Sample Grade	N/A	--	--	--	--	--	--	--	--	6	4.3	2.4	8.1
	All lots	N/A	599	2.7	0.0	7.5	569	2.6	0.0	4.9	860	1.6	0.0	8.1
Contrasting Classes	U.S. No. 1	1.0	83	0.1	0.0	0.6	77	0.2	0.0	1.0	111	0.2	0.0	0.9
	U.S. No. 2	2.0	514	0.0	0.0	1.6	492	0.1	0.0	1.4	739	0.1	0.0	1.5
	U.S. No. 3	3.0	2	0.0	0.0	0.0	--	--	--	--	3	0.0	0.0	0.0
	U.S. No. 5	10.0	--	--	--	--	--	--	--	--	1	0.0	0.0	0.0
	U.S. Sample Grade	N/A	--	--	--	--	--	--	--	--	6	0.4	0.0	1.2
	All lots	N/A	599	0.0	0.0	1.6	569	0.1	0.0	1.4	860	0.1	0.0	1.5

continued

Table 2. Summary of export Hard Red Winter wheat quality, 1991-93--Continued

Factor	Grade	Grade No. of Limit	1991			1992			1993			Avg.	Low	High
			Lots	Avg.	Low	High	Lots	Avg.	Low	High	Lots			
Protein (as is basis)	U.S. No. 1	N/A	81	12.9	11.6	4.1	77	12.6	11.5	13.9	102	12.3	11.4	13.6
	U.S. No. 2	N/A	353	12.5	11.5	3.8	333	12.2	10.3	14.0	435	11.8	9.8	13.7
	U.S. No. 3	N/A	1	12.0	12.0	12.0	--	--	--	--	1	12.3	12.3	12.3
	U.S. No. 5	N/A	--	--	--	--	--	--	--	--	--	--	--	--
	U.S. Sample Grade	N/A	--	--	--	--	--	--	--	--	--	--	--	--
	All lots	N/A	435	12.5	11.5	4.1	410	12.3	10.3	14.0	538	11.9	9.8	13.7
Protein (12% moisture)	U.S. No. 1	N/A	81	12.6	11.5	3.7	77	12.4	11.5	13.5	102	12.2	11.5	13.5
	U.S. No. 2	N/A	353	12.4	11.2	3.6	333	12.2	10.1	13.7	435	11.9	9.6	13.5
	U.S. No. 3	N/A	1	12.2	12.2	12.2	--	--	--	--	1	12.3	12.3	12.3
	U.S. No. 5	N/A	--	--	--	--	--	--	--	--	--	--	--	--
	U.S. Sample Grade	N/A	--	--	--	--	--	--	--	--	--	--	--	--
	All lots	N/A	435	12.4	11.2	3.7	410	12.2	10.1	13.7	538	11.9	9.6	13.5

N/A = Does not apply.

-- = No lots reported in this category.

¹⁻³ Effective May 1, 1993, the foreign material grade limits for U.S. No. 1, 2, and 3 wheats are 0.4, 0.7, and 1.3 percent, respectively.

⁴ The sum of the component factor averages may not equal the average for this factor due to rounding.

Table 3. Summary of export Hard Red Spring wheat quality, 1991-93

Table 1. Summary of Quality Data for Soybean Seed														
Factor	Grade	1991					1992				1993			
		Grade	No. of				No. of				No. of			
		Limit	Lots	Avg.	Low	High	Lots	Avg.	Low	High	Lots	Avg.	Low	High
Test Weight (lb/bu)	U.S. No. 1	58.0	100	61.3	59.5	62.3	88	61.6	59.3	62.8	113	61.4	59.5	62.9
	U.S. No. 2	57.0	502	60.7	57.4	64.6	576	60.3	58.3	70.9	678	60.3	57.1	62.7
	U.S. No. 3	55.0	3	58.3	57.7	58.7	2	58.3	57.9	59.8	3	58.4	58.3	58.9
	All lots	N/A	605	60.8	57.4	64.6	666	60.4	57.9	70.9	794	60.4	57.1	62.9
Test Weight (kg/hl)	U.S. No. 1	N/A	100	78.9	76.6	80.2	88	79.2	76.3	80.8	113	79.0	76.6	81.0
	U.S. No. 2	N/A	502	78.1	73.9	83.2	576	77.6	75.0	91.3	678	77.6	73.5	80.7
	U.S. No. 3	N/A	3	75.0	74.3	75.6	2	75.1	74.6	77.0	3	75.2	75.0	75.8
	All lots	N/A	605	78.2	73.9	83.2	666	77.7	74.6	91.3	794	77.8	73.5	81.0
Moisture	U.S. No. 1	N/A	100	11.0	9.6	12.4	88	11.4	9.1	13.4	113	12.3	10.0	13.4
	U.S. No. 2	N/A	502	11.8	8.5	13.3	576	12.2	9.0	14.1	678	12.9	10.1	14.2
	U.S. No. 3	N/A	3	12.6	12.4	12.8	2	12.4	12.4	12.5	3	13.0	12.7	13.2
	All lots	N/A	605	11.7	8.5	13.3	666	12.2	9.0	14.1	794	12.8	10.0	14.2
Heat-damaged Kernels	U.S. No. 1	0.2	100	0.0	0.0	0.0	88	0.0	0.0	0.0	136	0.0	0.0	0.0
	U.S. No. 2	0.2	502	0.0	0.0	0.1	576	0.0	0.0	0.0	688	0.0	0.0	0.1
	U.S. No. 3	0.5	3	0.0	0.0	0.0	2	0.0	0.0	0.0	7	0.0	0.0	0.0
	All lots	N/A	605	0.0	0.0	0.1	666	0.0	0.0	0.0	831	0.0	0.0	0.1
Damaged Kernels (Total)	U.S. No. 1	2.0	100	0.3	0.0	1.0	88	0.3	0.0	1.4	136	0.7	0.0	1.7
	U.S. No. 2	4.0	502	0.8	0.0	2.8	576	1.4	0.0	3.5	688	2.1	0.0	3.8
	U.S. No. 3	7.0	3	3.4	2.9	4.0	2	2.4	2.3	2.6	7	4.5	0.0	5.6
	All lots	N/A	605	0.8	0.0	4.0	666	1.3	0.0	3.5	831	2.0	0.0	5.6
Foreign Material	U.S. No. 1	0.5 ¹	100	0.2	0.1	0.5	88	0.2	0.1	0.5	136	0.2	0.0	0.4
	U.S. No. 2	1.0 ²	502	0.3	0.0	0.9	576	0.3	0.1	0.8	688	0.3	0.0	0.7
	U.S. No. 3	2.0 ³	3	0.2	0.2	0.3	2	1.1	0.6	1.2	7	0.3	0.0	0.4
	All lots	N/A	605	0.2	0.0	0.9	666	0.3	0.1	1.2	831	0.3	0.0	0.7
Shrunken and Broken	U.S. No. 1	3.0	100	1.6	1.0	2.4	88	1.6	0.7	2.7	136	1.1	0.0	1.9
	U.S. No. 2	5.0	502	1.7	1.1	2.9	576	1.5	0.6	2.8	688	1.1	0.0	1.9
	U.S. No. 3	8.0	3	2.2	2.1	2.3	2	2.5	2.0	2.6	7	1.3	0.0	1.5
	All lots	N/A	605	1.7	1.0	2.9	666	1.5	0.6	2.8	831	1.1	0.0	1.9

continued

Table 3. Summary of export Hard Red Spring wheat quality, 1991-93--Continued

Factor	Grade	1991					1992				1993			
		Grade No. of Limit	No. of Lots	Avg.	Low	High	No. of Lots	Avg.	Low	High	No. of Lots	Avg.	Low	High
Total Defects ⁴	U.S. No. 1	3.0	100	2.1	1.4	3.0	88	2.1	1.2	3.0	136	2.0	0.0	2.9
	U.S. No. 2	5.0	502	2.8	1.5	4.8	576	3.1	1.2	4.9	688	3.5	0.0	5.0
	U.S. No. 3	8.0	3	5.8	5.2	6.4	2	5.9	5.2	6.1	7	6.2	0.0	7.3
	All lots	N/A	605	2.8	1.4	6.4	666	3.0	1.2	6.1	831	3.3	0.0	7.3
Dockage	U.S. No. 1	N/A	100	0.6	0.3	2.0	88	0.7	0.4	1.0	136	0.7	0.0	1.1
	U.S. No. 2	N/A	502	0.8	0.3	1.9	576	0.9	0.4	2.5	688	0.8	0.0	1.5
	U.S. No. 3	N/A	3	1.4	1.2	1.6	2	1.5	1.3	2.2	7	0.8	0.0	0.9
	All lots	N/A	605	0.8	0.3	2.0	666	0.8	0.4	2.5	831	0.8	0.0	1.5
Wheat of Other Classes	U.S. No. 1	3.0	100	0.8	0.0	2.4	88	0.8	0.0	2.6	136	0.8	0.0	2.4
	U.S. No. 2	5.0	502	2.3	0.0	4.9	576	2.3	0.0	4.9	688	1.4	0.0	4.9
	U.S. No. 3	10.0	3	1.1	0.0	1.8	2	6.1	3.4	6.8	7	0.7	0.0	1.0
	All lots	N/A	605	2.1	0.0	4.9	666	2.2	0.0	6.8	831	1.3	0.0	4.9
Contrasting Classes	U.S. No. 1	1.0	100	0.2	0.0	0.8	88	0.3	0.0	1.0	136	0.2	0.0	0.8
	U.S. No. 2	2.0	502	0.2	0.0	1.2	576	0.2	0.0	1.9	688	0.2	0.0	1.7
	U.S. No. 3	3.0	3	0.0	0.0	0.0	2	0.0	0.0	0.2	7	0.0	0.0	0.0
	All lots	N/A	605	0.2	0.0	1.2	666	0.2	0.0	1.9	831	0.2	0.0	1.7
Protein (as is basis)	U.S. No. 1	N/A	100	14.7	14.1	15.4	88	14.5	13.1	15.3	113	14.0	12.6	15.2
	U.S. No. 2	N/A	416	14.3	12.0	16.7	491	14.1	11.1	16.5	588	13.5	11.1	16.3
	U.S. No. 3	N/A	3	14.6	14.6	14.7	1	14.4	14.4	14.4	3	14.0	13.8	14.2
	All lots	N/A	519	14.4	12.0	16.7	580	14.1	11.1	16.5	704	13.6	11.1	16.3
Protein (12% moisture)	U.S. No. 1	N/A	100	14.6	14.1	15.3	88	14.5	13.3	15.0	113	14.1	12.8	15.3
	U.S. No. 2	N/A	416	14.2	11.8	16.4	491	14.1	11.3	16.2	588	13.7	11.3	16.3
	U.S. No. 3	N/A	3	14.7	14.7	14.8	1	14.5	14.5	14.5	3	14.2	14.0	14.3
	All lots	N/A	519	14.3	11.8	16.4	580	14.1	11.3	16.2	704	13.7	11.3	16.3

N/A = Does not apply.

¹⁻³ Effective May 1, 1993, the foreign material grade limits for U.S. No. 1, 2, and 3 wheats are 0.4, 0.7, and 1.3 percent, respectively.⁴The sum of the component factor averages may not equal the average for this factor due to rounding.

Table 4. Summary of export Soft Red Winter wheat quality, factor averages by grade, 1991-93

Factor	Grade	1991					1992				1993			
		Grade No. of	No. of				No. of				No. of			
		Limit Lots Avg. Low High												
Test Weight (lb/bu)	U.S. No. 1	60.0	--	--	--	--	2	60.4	60.3	60.6	--	--	--	--
	U.S. No. 2	58.0	229	58.5	58.0	61.2	216	59.3	58.0	60.8	229	59.4	58.0	61.7
	U.S. No. 3	56.0	5	57.2	56.0	58.0	2	58.9	57.0	59.5	8	59.7	56.5	60.9
	U.S. No. 4	54.0	--	--	--	--	1	54.4	54.4	54.4	8	58.6	58.3	59.4
	U.S. No. 5	51.0	1	53.1	53.1	53.1	--	--	--	--	5	58.9	58.4	59.3
	U.S. Sample Grade	N/A	--	--	--	--	1	60.1	60.1	60.1	6	57.9	56.9	58.7
	All lots	N/A	235	58.5	53.1	61.2	222	59.3	54.4	60.8	256	59.4	56.5	61.7
Test Weight (kg/hl)	U.S. No. 1	N/A	--	--	--	--	2	77.8	77.6	78.0	--	--	--	--
	U.S. No. 2	N/A	229	75.4	74.7	78.7	216	76.4	74.7	78.3	229	76.5	74.7	79.5
	U.S. No. 3	N/A	5	73.7	72.1	74.7	2	75.8	73.3	76.6	8	76.9	72.7	78.4
	U.S. No. 4	N/A	--	--	--	--	1	70.0	70.0	70.0	8	75.4	75.0	76.4
	U.S. No. 5	N/A	1	68.3	68.3	68.3	1	--	--	--	5	75.8	75.2	76.3
	U.S. Sample Grade	N/A	--	--	--	--	--	77.4	77.4	77.4	6	74.6	73.3	75.6
	All lots	N/A	235	75.3	68.3	78.7	222	76.4	70.0	78.3	256	76.4	72.7	79.5
Moisture	U.S. No. 1	N/A	--	--	--	--	2	13.1	12.9	13.4	--	--	--	--
	U.S. No. 2	N/A	229	12.9	11.7	13.5	216	13.4	11.9	14.1	229	13.2	12.0	13.8
	U.S. No. 3	N/A	5	12.7	12.6	13.0	2	12.7	12.7	12.9	8	13.2	12.7	13.5
	U.S. No. 4	N/A	--	--	--	--	1	12.3	12.3	12.3	8	13.2	12.9	13.3
	U.S. No. 5	N/A	1	13.4	13.4	13.4	--	--	--	--	5	13.1	12.8	13.3
	U.S. Sample Grade	N/A	--	--	--	--	1	12.9	12.9	12.9	6	13.3	12.9	13.6
	All lots	N/A	235	12.9	11.7	13.5	222	13.4	11.9	14.1	256	13.2	12.0	13.8
Heat-damaged Kernels	U.S. No. 1	0.2	--	--	--	--	2	0.0	0.0	0.0	--	--	--	--
	U.S. No. 2	0.2	229	0.0	0.0	0.1	216	0.0	0.0	0.1	231	0.0	0.0	0.0
	U.S. No. 3	0.5	5	0.0	0.0	0.0	2	0.0	0.0	0.0	8	0.0	0.0	0.0
	U.S. No. 4	1.0	--	--	--	--	1	0.0	0.0	0.0	8	0.0	0.0	0.1
	U.S. No. 5	3.0	1	0.0	0.0	0.0	--	--	--	--	5	0.1	0.0	0.2
	U.S. Sample Grade	N/A	--	--	--	--	1	0.0	0.0	0.0	6	0.1	0.0	0.2
	All lots	N/A	235	0.0	0.0	0.1	222	0.0	0.0	0.1	258	0.0	0.0	0.2
Damaged Kernels (Total)	U.S. No. 1	2.0	--	--	--	--	2	0.9	0.6	1.3	--	--	--	--
	U.S. No. 2	4.0	229	2.3	0.6	3.7	216	2.2	0.5	3.9	231	2.4	0.0	3.9
	U.S. No. 3	7.0	5	3.0	2.0	5.1	2	4.0	3.1	6.8	8	4.2	1.1	6.0
	U.S. No. 4	10.0	--	--	--	--	1	5.4	5.4	5.4	8	8.6	7.1	10.0
	U.S. No. 5	15.0	1	12.0	12.0	12.0	--	--	--	--	5	11.8	10.1	14.7
	U.S. Sample Grade	N/A	--	--	--	--	1	1.4	1.4	1.4	6	17.7	10.7	20.3
	All lots	N/A	235	2.3	0.6	12.0	222	2.2	0.5	6.8	258	3.2	0.0	20.3

continued

Table 4. Summary of export Soft Red Winter wheat quality, factor averages by grade, 1991-93--Continued

Factor	Grade	1991					1992					1993			
		Grade No. of Limit	No. of Lots	Avg.	Low	High	No. of Lots	Avg.	Low	High	No. of Lots	Avg.	Low	High	
Foreign Material	U.S. No. 1	0.5 ¹	--	--	--	--	2	0.0	0.0	0.1	--	--	--	--	
	U.S. No. 2	1.0 ²	229	0.2	0.0	0.6	216	0.2	0.0	0.8	231	0.2	0.0	0.7	
	U.S. No. 3	2.0 ³	5	0.2	0.2	0.3	2	0.5	0.1	0.6	8	0.2	0.1	0.4	
	U.S. No. 4	3.0	--	--	--	--	1	0.2	0.2	0.2	8	0.1	0.1	0.3	
	U.S. No. 5	5.0	1	0.1	0.1	0.1	--	--	--	--	5	0.1	0.0	0.3	
	U.S. Sample Grade	N/A	--	--	--	--	1	0.1	0.1	0.1	6	0.2	0.1	0.4	
	All lots	N/A	235	0.2	0.0	0.6	222	0.2	0.0	0.8	258	0.2	0.0	0.7	
Shrunken and Broken	U.S. No. 1	3.0	--	--	--	--	2	0.9	0.7	1.1	--	--	--	--	
	U.S. No. 2	5.0	229	1.4	0.6	2.2	216	1.0	0.3	2.1	231	1.0	0.0	1.7	
	U.S. No. 3	8.0	5	1.8	1.3	1.8	2	1.2	0.7	1.4	8	1.0	0.8	1.3	
	U.S. No. 4	12.0	--	--	--	--	1	2.2	2.2	2.2	8	0.7	0.5	1.1	
	U.S. No. 5	20.0	1	2.7	2.7	2.7	--	--	--	--	5	0.8	0.4	1.3	
	U.S. Sample Grade	N/A	--	--	--	--	1	0.9	0.9	0.9	6	1.1	0.7	1.3	
	All lots	N/A	235	1.4	0.6	2.7	222	1.0	0.3	2.2	258	1.0	0.0	1.7	
Total Defects ⁴	U.S. No. 1	3.0	--	--	--	--	2	1.9	1.7	2.1	--	--	--	--	
	U.S. No. 2	5.0	229	3.8	1.8	5.0	216	3.3	1.3	4.9	231	3.5	0.0	4.8	
	U.S. No. 3	8.0	5	5.0	3.5	7.1	2	5.7	5.1	7.6	8	5.4	2.3	7.2	
	U.S. No. 4	12.0	--	--	--	--	1	7.8	7.8	7.8	8	9.5	8.4	10.6	
	U.S. No. 5	20.0	1	14.8	14.8	14.8	--	--	--	--	5	12.8	10.9	16.3	
	U.S. Sample Grade	N/A	--	--	--	--	1	2.4	2.4	2.4	6	19.0	12.2	21.6	
	All lots	N/A	235	3.9	1.8	14.8	222	3.3	1.3	7.8	258	4.4	0.0	21.6	
Dockage	U.S. No. 1	N/A	--	--	--	--	2	0.6	0.5	0.6	--	--	--	--	
	U.S. No. 2	N/A	229	0.8	0.4	2.0	216	0.7	0.3	2.3	231	0.8	0.0	1.7	
	U.S. No. 3	N/A	5	1.0	0.8	1.5	2	0.9	0.2	1.1	8	0.8	0.5	1.4	
	U.S. No. 4	N/A	--	--	--	--	1	1.4	1.4	1.4	8	0.9	0.7	1.1	
	U.S. No. 5	N/A	1	1.1	1.1	1.1	--	--	--	--	5	0.8	0.6	1.1	
	U.S. Sample Grade	N/A	--	--	--	--	1	0.9	0.9	0.9	6	0.8	0.7	0.9	
	All lots	N/A	235	0.8	0.4	2.0	222	0.7	0.2	2.3	258	0.8	0.0	1.7	
Wheat of Other Classes	U.S. No. 1	3.0	--	--	--	--	2	0.1	0.0	0.2	--	--	--	--	
	U.S. No. 2	5.0	229	1.7	0.0	4.8	216	0.9	0.0	4.5	231	0.7	0.0	5.0	
	U.S. No. 3	10.0	5	1.2	0.5	6.2	2	0.2	0.0	0.2	8	0.6	0.0	6.2	
	U.S. No. 4	10.0	--	--	--	--	1	0.0	0.0	0.0	8	2.7	0.0	6.3	
	U.S. No. 5	10.0	1	0.7	0.7	0.7	--	--	--	--	5	0.8	0.3	7.8	
	U.S. Sample Grade	N/A	--	--	--	--	1	0.0	0.0	0.0	6	1.2	0.0	3.6	
	All lots	N/A	235	1.7	0.0	6.2	222	0.9	0.0	4.5	258	0.9	0.0	7.8	

continued

Table 4. Summary of export Soft Red Winter wheat quality, factor averages by grade, 1991-93--Continued

Factor	Grade	1991					1992				1993			
		Grade No. of					No. of				No. of			
		Limit	Lots	Avg.	Low	High	Lots	Avg.	Low	High	Lots	Avg.	Low	High
Contrasting Classes	U.S. No. 1	1.0	--	--	--	--	2	0.1	0.0	0.2	--	--	--	--
	U.S. No. 2	2.0	229	0.0	0.0	1.4	216	0.0	0.0	0.7	231	0.0	0.0	0.7
	U.S. No. 3	3.0	5	0.0	0.0	0.0	2	0.0	0.0	0.0	8	0.0	0.0	0.1
	U.S. No. 4	10.0	1	0.0	0.0	0.0	1	0.0	0.0	0.0	8	0.0	0.0	0.0
	U.S. No. 5	10.0	--	--	--	--	--	--	--	--	5	0.0	0.0	0.1
	U.S. Sample Grade	N/A	--	--	--	--	1	0.0	0.0	0.0	6	0.0	0.0	0.0
	All lots	N/A	235	0.0	0.0	1.4	222	0.0	0.0	0.7	258	0.0	0.0	0.7
Protein (as is basis)	U.S. No. 1	N/A	--	--	--	--	1	10.5	10.5	10.5	--	--	--	--
	U.S. No. 2	N/A	30	10.5	10.0	11.3	34	9.9	9.4	11.0	58	9.8	8.9	10.4
	U.S. No. 3	N/A	0	--	--	--	0	--	--	--	4	9.5	9.5	10.1
	U.S. No. 4	N/A	--	--	--	--	1	11.6	11.6	11.6	--	--	--	--
	U.S. No. 5	N/A	0	--	--	--	--	--	--	--	--	--	--	--
	U.S. Sample Grade	N/A	--	--	--	--	0	--	--	--	--	--	--	--
	All lots	N/A	30	10.5	10.0	11.3	36	9.9	9.4	11.6	62	9.8	8.9	10.4
Protein (12% moisture)	U.S. No. 1	N/A	--	--	--	--	1	10.6	10.6	10.6	--	--	--	--
	U.S. No. 2	N/A	30	10.6	10.0	11.3	34	10.0	9.5	11.2	58	9.9	9.0	10.5
	U.S. No. 3	N/A	0	--	--	--	0	--	--	--	4	9.6	9.6	10.2
	U.S. No. 4	N/A	--	--	--	--	1	11.6	11.6	11.6	--	--	--	--
	U.S. No. 5	N/A	0	--	--	--	--	--	--	--	--	--	--	--
	U.S. Sample Grade	N/A	--	--	--	--	0	--	--	--	--	--	--	--
	All lots	N/A	30	10.6	10.1	11.3	36	10.0	9.5	11.6	62	9.9	9.0	10.5

N/A = Does not apply.

-- = No lots reported in this category.

¹⁻³ Effective May 1, 1993, the foreign material grade limits for U.S. No. 1, 2, and 3 wheats are 0.4, 0.7, and 1.3 percent, respectively.

⁴ The sum of the component factor averages may not equal the average for this factor due to rounding.

Table 5. Summary of export Durum wheat quality, factor averages by grade, 1991-93

Factor	Grade	1991					1992				1993			
		Grade No. of Limit	Lots	Avg.	Low	High	No. of Lots	Avg.	Low	High	No. of Lots	Avg.	Low	High
Test Weight (lb/bu)	U.S. No. 1	60.0	4	62.9	60.5	63.5	14	61.2	60.2	63.2	24	61.6	60.2	63.0
	U.S. No. 2	58.0	45	60.4	59.4	62.1	54	60.7	58.5	62.7	78	60.8	58.1	63.4
	U.S. No. 3	56.0	65	60.3	58.5	61.6	48	60.0	58.5	61.6	41	59.9	56.2	61.7
	All lots	N/A	114	60.4	58.5	63.5	116	60.3	58.5	63.2	143	60.6	56.2	63.4
Test Weight (kg/hl)	U.S. No. 1	N/A	4	81.0	77.8	81.7	14	78.7	77.5	81.3	24	79.3	77.5	81.1
	U.S. No. 2	N/A	45	77.8	76.5	80.0	54	78.1	75.4	80.7	78	78.3	74.8	81.7
	U.S. No. 3	N/A	65	77.6	75.2	79.4	48	77.2	75.3	79.3	41	77.2	72.4	79.4
	All lots	N/A	114	77.8	75.2	81.7	116	77.7	75.3	81.3	143	78.1	72.4	81.7
Moisture	U.S. No. 1	N/A	4	8.4	7.8	11.5	14	10.8	7.5	12.8	24	11.8	7.2	13.3
	U.S. No. 2	N/A	45	11.7	10.4	12.7	54	11.8	7.3	13.0	78	12.4	6.8	13.6
	U.S. No. 3	N/A	65	11.8	11.0	12.3	48	11.8	10.4	12.8	41	12.9	11.2	13.5
	All lots	N/A	114	11.7	7.8	12.7	116	11.7	7.3	13.0	143	12.5	6.8	13.6
Heat-damaged Kernels	U.S. No. 1	0.2	4	0.0	0.0	0.0	14	0.0	0.0	0.0	25	0.0	0.0	0.0
	U.S. No. 2	0.2	45	0.0	0.0	0.0	54	0.0	0.0	0.0	78	0.0	0.0	0.0
	U.S. No. 3	0.5	65	0.0	0.0	0.1	48	0.0	0.0	0.1	41	0.0	0.0	0.1
	All lots	N/A	114	0.0	0.0	0.1	116	0.0	0.0	0.1	144	0.0	0.0	0.1
Damaged Kernels (Total)	U.S. No. 1	2.0	4	0.4	0.3	0.8	14	0.6	0.1	1.2	25	0.8	0.0	1.2
	U.S. No. 2	4.0	45	1.2	0.0	2.3	54	1.1	0.0	2.4	78	1.5	0.4	3.0
	U.S. No. 3	7.0	65	2.1	1.0	4.7	48	1.6	0.7	3.2	41	2.5	0.8	4.8
	All lots	N/A	114	1.9	0.0	4.7	116	1.4	0.0	3.2	144	1.7	0.0	4.8
Foreign Material	U.S. No. 1	0.5 ¹	4	0.2	0.1	0.3	14	0.2	0.1	0.3	25	0.2	0.0	0.4
	U.S. No. 2	1.0 ²	45	0.3	0.0	0.7	54	0.2	0.0	0.4	78	0.3	0.1	0.7
	U.S. No. 3	2.0 ³	65	0.3	0.1	0.8	48	0.3	0.1	1.2	41	0.4	0.1	0.8
	All lots	N/A	114	0.3	0.0	0.8	116	0.3	0.0	1.2	144	0.3	0.0	0.8
Shrunken and Broken	U.S. No. 1	3.0	4	0.7	0.5	2.2	14	1.5	0.8	2.1	25	1.4	0.0	1.7
	U.S. No. 2	5.0	45	2.0	0.8	2.7	54	1.7	0.5	2.8	78	1.5	0.3	2.2
	U.S. No. 3	8.0	65	2.0	1.4	3.2	48	2.2	1.2	2.9	41	1.9	1.4	2.7
	All lots	N/A	114	2.0	0.5	3.2	116	2.0	0.5	2.9	144	1.6	0.0	2.7
Total Defects ⁴	U.S. No. 1	3.0	4	1.2	0.9	3.0	14	2.3	1.1	3.0	25	2.4	0.0	2.9
	U.S. No. 2	5.0	45	3.5	0.8	4.9	54	3.1	1.2	4.2	78	3.3	0.9	4.9
	U.S. No. 3	8.0	65	4.4	3.1	7.4	48	4.2	2.1	6.7	41	4.8	2.4	7.6
	All lots	N/A	114	4.1	0.8	7.4	116	3.7	1.1	6.7	144	3.7	0.0	7.6

continued

Table 5. Summary of export Durum wheat quality, factor averages by grade, 1991-93--Continued

Factor	Grade	1991					1992				1993			
		Grade No. of Limit	Lots	Avg.	Low	High	No. of Lots	Avg.	Low	High	No. of Lots	Avg.	Low	High
Dockage	U.S. No. 1	N/A	4	0.5	0.4	0.9	14	0.6	0.4	0.9	25	0.7	0.0	0.9
	U.S. No. 2	N/A	45	0.8	0.0	1.3	54	0.7	0.3	1.4	78	0.7	0.3	1.3
	U.S. No. 3	N/A	65	0.8	0.5	1.4	48	0.8	0.5	1.3	41	0.7	0.4	1.0
	All lots	N/A	114	0.8	0.0	1.4	116	0.8	0.3	1.4	144	0.7	0.0	1.3
Contrasting Classes	U.S. No. 1	1.0	4	0.1	0.0	0.9	14	0.4	0.0	0.7	25	0.4	0.0	0.8
	U.S. No. 2	2.0	45	1.0	0.0	2.0	54	0.8	0.0	1.8	78	0.8	0.0	1.9
	U.S. No. 3	3.0	65	2.1	0.6	2.9	48	1.9	0.1	2.6	41	1.6	0.3	3.0
	All lots	N/A	114	1.8	0.0	2.9	116	1.5	0.0	2.6	144	1.0	0.0	3.0
Protein (as is basis)	U.S. No. 1	N/A	0	--	--	--	0	--	--	--	2	13.4	13.1	15.0
	U.S. No. 2	N/A	8	14.6	14.0	17.0	17	13.7	12.4	15.9	18	13.1	12.6	14.8
	U.S. No. 3	N/A	7	14.2	13.7	14.5	0	--	--	--	1	12.3	12.3	12.3
	All lots	N/A	15	14.4	13.7	17.0	17	13.7	12.4	15.9	21	13.0	12.3	15.0
Protein (12% moisture)	U.S. No. 1	N/A	0	--	--	--	0	--	--	--	2	13.4	13.1	14.9
	U.S. No. 2	N/A	8	14.4	14.0	16.8	17	13.7	12.5	15.8	18	13.2	12.8	14.2
	U.S. No. 3	N/A	7	14.2	13.7	14.5	0	--	--	--	1	12.4	12.4	12.4
	All lots	N/A	15	14.3	13.7	16.8	17	13.7	12.5	15.8	21	13.1	12.4	14.9

N/A = Does not apply.

-- = No lots reported in this category.

^{1,3} Effective May 1, 1993, the foreign material grade limits for U.S. No. 1, 2, and 3 wheats are 0.4, 0.7, and 1.3 percent, respectively.⁴ The sum of the component factor averages may not equal the average for this factor due to rounding.

Table 6. Summary of export Soft White wheat quality, factor averages by grade, 1991-93

Factor	Grade	1991					1992					1993		
		Grade No. of Limit	Lots	Avg.	Low	High	No. of Lots	Avg.	Low	High	No. of Lots	Avg.	Low	High
Test Weight (lb/bu)	U.S. No. 1	60.0	122	61.2	60.2	63.0	110	61.0	60.1	62.5	131	61.0	60.0	62.9
	U.S. No. 2	58.0	266	61.0	59.4	62.4	292	60.3	58.1	62.1	260	60.3	58.2	69.2
	U.S. No. 3	56.0	--	--	--	--	--	--	--	--	1	61.9	61.9	61.9
	U.S. No. 4	54.0	--	--	--	--	--	--	--	--	1	58.1	58.1	58.1
	U.S. No. 5	51.0	--	--	--	--	--	--	--	--	5	57.8	56.3	59.3
	All lots	N/A	388	61.0	59.4	63.0	402	60.4	58.1	62.5	398	60.4	56.3	69.2
Test Weight (kg/hl)	U.S. No. 1	N/A	122	78.7	77.5	81.1	110	78.6	77.4	80.5	131	78.6	77.3	81.0
	U.S. No. 2	N/A	266	78.5	76.5	80.3	292	77.6	74.8	80.0	260	77.7	74.9	89.1
	U.S. No. 3	N/A	--	--	--	--	--	--	--	--	1	79.7	79.7	79.7
	U.S. No. 4	N/A	--	--	--	--	--	--	--	--	1	74.7	74.7	74.7
	U.S. No. 5	N/A	--	--	--	--	--	--	--	--	5	74.4	72.5	76.4
	All lots	N/A	388	78.6	76.5	81.1	402	77.7	74.8	80.5	398	77.7	72.5	89.1
Moisture	U.S. No. 1	N/A	122	9.7	8.0	1.8	110	9.7	8.6	11.9	131	10.1	8.1	12.3
	U.S. No. 2	N/A	266	9.6	8.6	3.3	292	9.6	8.0	13.4	260	10.2	7.9	13.4
	U.S. No. 3	N/A	--	--	--	--	--	--	--	--	1	10.3	10.3	10.3
	U.S. No. 4	N/A	--	--	--	--	--	--	--	--	1	9.9	9.9	9.9
	U.S. No. 5	N/A	--	--	--	--	--	--	--	--	5	10.4	8.5	13.2
	All lots	N/A	388	9.6	8.0	3.3	402	9.6	8.0	13.4	398	10.2	7.9	13.4
Heat-damaged Kernels	U.S. No. 1	0.2	122	0.0	0.0	0.1	110	0.0	0.0	0.1	131	0.0	0.0	0.0
	U.S. No. 2	0.2	266	0.0	0.0	0.1	292	0.0	0.0	0.1	262	0.0	0.0	0.0
	U.S. No. 3	0.5	--	--	--	--	--	--	--	--	1	0.0	0.0	0.0
	U.S. No. 4	1.0	--	--	--	--	--	--	--	--	1	0.0	0.0	0.0
	U.S. No. 5	3.0	--	--	--	--	--	--	--	--	5	0.1	0.0	0.6
	All lots	N/A	388	0.0	0.0	0.1	402	0.0	0.0	0.1	400	0.0	0.0	0.6
Damaged Kernels (Total)	U.S. No. 1	2.0	122	0.2	0.0	0.8	110	0.2	0.0	1.0	131	0.4	0.0	1.6
	U.S. No. 2	4.0	266	0.3	0.0	2.8	292	0.6	0.0	3.3	262	0.9	0.0	3.4
	U.S. No. 3	7.0	--	--	--	--	--	--	--	--	1	0.0	0.0	0.0
	U.S. No. 4	10.0	--	--	--	--	--	--	--	--	1	8.6	8.6	8.6
	U.S. No. 5	15.0	--	--	--	--	--	--	--	--	5	12.5	10.7	14.4
	All lots	N/A	388	0.3	0.0	2.8	402	0.6	0.0	3.3	400	1.0	0.0	14.4
Foreign Material	U.S. No. 1	0.5 ¹	122	0.2	0.0	0.5	110	0.2	0.0	0.5	131	0.2	0.0	0.4
	U.S. No. 2	1.0 ²	266	0.2	0.1	0.6	292	0.2	0.0	0.6	262	0.2	0.0	0.6
	U.S. No. 3	2.0 ³	--	--	--	--	--	--	--	--	1	0.2	0.2	0.2
	U.S. No. 4	3.0	--	--	--	--	--	--	--	--	1	0.1	0.1	0.1
	U.S. No. 5	5.0	--	--	--	--	--	--	--	--	5	0.1	0.1	0.2
	All lots	N/A	388	0.2	0.0	0.6	402	0.2	0.0	0.6	400	0.2	0.0	0.6
Shrunken and Broken	U.S. No. 1	3.0	122	1.3	0.6	1.9	110	1.3	0.6	2.0	131	1.0	0.4	1.4
	U.S. No. 2	5.0	266	1.4	0.5	2.2	292	1.3	0.3	2.3	262	1.1	0.0	2.0
	U.S. No. 3	8.0	--	--	--	--	--	--	--	--	1	0.7	0.7	0.7
	U.S. No. 4	12.0	--	--	--	--	--	--	--	--	1	0.8	0.8	0.8
	U.S. No. 5	20.0	--	--	--	--	--	--	--	--	5	1.2	1.0	1.7
	All lots	N/A	388	1.4	0.5	2.2	402	1.3	0.3	2.3	400	1.0	0.0	2.0

continued

Table 6. Summary of export Soft White wheat quality, factor averages by grade, 1991-93--Continued

Factor	Grade	Grade No. of Limit	1991				1992				1993			
			Lots	Avg.	Low	High	Lots	Avg.	Low	High	Lots	Avg.	Low	High
Total Defects ⁴	U.S. No. 1	3.0	122	1.7	0.7	2.3	110	1.7	0.8	2.6	131	1.5	0.5	2.6
	U.S. No. 2	5.0	266	1.9	1.1	4.1	292	2.2	0.7	4.8	262	2.2	0.0	4.8
	U.S. No. 3	8.0	--	--	--	--	--	--	--	--	1	0.9	0.9	0.9
	U.S. No. 4	12.0	--	--	--	--	--	--	--	--	1	9.5	9.5	9.5
	U.S. No. 5	20.0	--	--	--	--	--	--	--	--	5	13.8	11.9	15.7
	All lots	N/A	388	1.8	0.7	4.1	402	2.1	0.7	4.8	400	2.2	0.0	15.7
Dockage	U.S. No. 1	N/A	122	0.7	0.4	1.2	110	0.8	0.3	1.4	131	0.6	0.3	1.1
	U.S. No. 2	N/A	266	0.7	0.3	1.5	292	0.8	0.3	1.5	262	0.7	0.0	1.3
	U.S. No. 3	N/A	--	--	--	--	--	--	--	--	1	0.5	0.5	0.5
	U.S. No. 4	N/A	--	--	--	--	--	--	--	--	1	0.4	0.4	0.4
	U.S. No. 5	N/A	--	--	--	--	--	--	--	--	5	0.9	0.7	1.2
	All lots	N/A	388	0.7	0.3	1.5	402	0.8	0.3	1.5	400	0.7	0.0	1.3
Wheat of Other Classes	U.S. No. 1	3.0	122	0.2	0.0	0.6	110	0.3	0.0	1.7	131	0.2	0.0	1.2
	U.S. No. 2	5.0	266	0.3	0.0	1.6	292	0.6	0.0	3.9	262	0.4	0.0	1.4
	U.S. No. 3	10.0	--	--	--	--	--	--	--	--	1	0.0	0.0	0.0
	U.S. No. 4	10.0	--	--	--	--	--	--	--	--	1	0.2	0.2	0.2
	U.S. No. 5	10.0	--	--	--	--	--	--	--	--	5	4.5	0.3	10.0
	All lots	N/A	388	0.3	0.0	1.6	402	0.6	0.0	3.9	400	0.4	0.0	10.0
Contrasting Classes	U.S. No. 1	1.0	122	0.2	0.0	0.6	110	0.3	0.0	1.0	131	0.2	0.0	1.0
	U.S. No. 2	2.0	266	0.3	0.0	1.6	292	0.4	0.0	1.8	262	0.4	0.0	1.4
	U.S. No. 3	3.0	--	--	--	--	--	--	--	--	1	0.0	0.0	0.0
	U.S. No. 4	10.0	--	--	--	--	--	--	--	--	1	0.2	0.2	0.2
	U.S. No. 5	10.0	--	--	--	--	--	--	--	--	5	4.5	0.3	10.0
	All lots	N/A	388	0.2	0.0	1.6	402	0.4	0.0	1.8	400	0.4	0.0	10.0
Protein (as is basis)	U.S. No. 1	N/A	118	10.4	8.5	12.1	106	10.6	8.8	12.0	127	10.3	8.7	11.7
	U.S. No. 2	N/A	125	10.6	9.5	11.7	143	11.0	8.8	11.9	149	10.7	9.4	11.9
	U.S. No. 3	N/A	--	--	--	--	--	--	--	--	1	9.4	9.4	9.4
	U.S. No. 4	N/A	--	--	--	--	--	--	--	--	--	--	--	--
	U.S. No. 5	N/A	--	--	--	--	--	--	--	--	--	--	--	--
	All lots	N/A	243	10.6	8.5	12.1	249	10.9	8.8	12.0	277	10.6	8.7	11.9
Protein (12% moisture)	U.S. No. 1	N/A	118	10.1	8.4	11.8	106	10.4	8.6	11.8	127	10.1	8.5	11.3
	U.S. No. 2	N/A	125	10.3	9.3	11.4	143	10.7	8.7	11.5	149	10.5	9.3	11.4
	U.S. No. 3	N/A	--	--	--	--	--	--	--	--	1	9.2	9.2	9.2
	U.S. No. 4	N/A	--	--	--	--	--	--	--	--	--	--	--	--
	U.S. No. 5	N/A	--	--	--	--	--	--	--	--	--	--	--	--
	All lots	N/A	243	10.3	8.4	11.8	249	10.6	8.6	11.8	277	10.4	8.5	11.4

N/A = Does not apply.

-- = No lots reported in this category.

¹⁻³ Effective May 1, 1993, the foreign material grade limits for U.S. No. 1, 2, and 3 wheats are 0.4, 0.7, and 1.3 percent, respectively.⁴ The sum of the component factor averages may not equal the average for this factor due to rounding.

Table 7. Summary of export Hard White wheat quality, 1991-93

Factor	Grade	1991					1992				1993			
		Grade Limit	No. of Lots	Avg.	Low	High	No. of Lots	Avg.	Low	High	No. of Lots	Avg.	Low	High
Test Weight (lb/bu)	U.S. No. 2	60.0	1	61.7	61.7	61.7	1	59.0	59.0	59.0	--	--	--	--
	All lots	N/A	1	61.7	61.7	61.7	1	59.0	59.0	59.0	--	--	--	--
Test Weight (kg/hl)	U.S. No. 2		1	79.4	79.4	79.4	1	76.0	76.0	76.0	--	--	--	--
	All lots	N/A	1	79.4	79.4	79.4	1	76.0	76.0	76.0	--	--	--	--
Moisture	U.S. No. 2	N/A	1	10.1	10.1	10.1	1	10.8	10.8	10.8	--	--	--	--
	All lots	N/A	1	10.1	10.1	10.1	1	10.8	10.8	10.8	--	--	--	--
Heat-damaged Kernels	U.S. No. 2	0.2	1	0.0	0.0	0.0	1	0.0	0.0	0.0	--	--	--	--
	All lots	N/A	1	0.0	0.0	0.0	1	0.0	0.0	0.0	--	--	--	--
Damaged Kernels (Total)	U.S. No. 2	4.0	1	0.0	0.0	0.0	1	0.1	0.1	0.1	--	--	--	--
	All lots	N/A	1	0.0	0.0	0.0	1	0.1	0.1	0.1	--	--	--	--
Foreign Material	U.S. No. 2	0.7	1	0.1	0.1	0.1	1	0.1	0.1	0.1	--	--	--	--
	All lots	N/A	1	0.1	0.1	0.1	1	0.1	0.1	0.1	--	--	--	--
Shrunken and Broken	U.S. No. 2	5.0	1	2.2	2.2	2.2	1	0.8	0.8	0.8	--	--	--	--
	All lots	N/A	1	2.2	2.2	2.2	1	0.8	0.8	0.8	--	--	--	--
Total Defects	U.S. No. 2	5.0	1	2.3	2.3	2.3	1	1.0	1.0	1.0	--	--	--	--
	All lots	N/A	1	2.3	2.3	2.3	1	1.0	1.0	1.0	--	--	--	--
Dockage	U.S. No. 2	N/A	1	0.7	0.7	0.7	1	0.7	0.7	0.7	--	--	--	--
	All lots	N/A	1	0.7	0.7	0.7	1	0.7	0.7	0.7	--	--	--	--
Wheat of other Classes	U.S. No. 2	5.0	1	0.1	0.1	0.1	1	0.6	0.6	0.6	--	--	--	--
	All lots	N/A	1	0.1	0.1	0.1	1	0.6	0.6	0.6	--	--	--	--
Contrasting Classes	U.S. No. 2	2.0	1	0.1	0.1	0.1	1	0.3	0.3	0.3	--	--	--	--
	All lots	N/A	1	0.1	0.1	0.1	1	0.3	0.3	0.3	--	--	--	--
Protein (as is basis)	U.S. No. 2	N/A	1	14.0	14.0	14.0	1	14.8	14.8	14.8	--	--	--	--
	All lots	N/A	1	14.0	14.0	14.0	1	14.8	14.8	14.8	--	--	--	--
Protein (12% moisture)	U.S. No. 2	N/A	1	13.7	13.7	13.7	1	14.6	14.6	14.6	--	--	--	--
	All lots	N/A	1	13.7	13.7	13.7	1	14.6	14.6	14.6	--	--	--	--

N/A = Does not apply.

-- = No lots reported in this category.

Table 8. Summary of export Mixed wheat quality, 1991-93

Factor	Grade	1991					1992				1993			
		Grade No. of Limit	Lots	Avg.	Low	High	No. of				No. of			
							Lots	Avg.	Low	High	Lots	Avg.	Low	High
Test Weight (lb/bu)	U.S. No. 2	58.0	3	59.2	58.4	60.1	1	59.8	59.8	59.8	3	60.5	59.1	61.8
	U.S. No. 4	54.0	--	--	--	--	--	--	--	--	1	58.1	58.1	58.1
	U.S. No. 5	51.0	--	--	--	--	--	--	--	--	1	57.7	57.7	57.7
	U.S. Sample Grade	N/A	--	--	--	--	--	--	--	--	5	58.0	57.6	58.8
	All lots	N/A	3	59.2	58.4	60.1	1	59.8	59.8	59.8	10	58.2	57.6	61.8
Test Weight (kg/hl)	U.S. No. 2	N/A	3	76.2	75.1	77.4	1	77.0	77.0	77.0	3	77.9	76.0	79.6
	U.S. No. 4	N/A	--	--	--	--	--	--	--	--	1	74.8	74.8	74.8
	U.S. No. 5	N/A	--	--	--	--	--	--	--	--	1	74.3	74.3	74.3
	U.S. Sample Grade	N/A	--	--	--	--	--	--	--	--	5	74.7	74.2	75.6
	All lots	N/A	3	76.2	75.1	77.4	1	77.0	77.0	77.0	10	74.9	74.2	79.6
Moisture	U.S. No. 2	N/A	3	12.2	11.8	2.7	1	11.7	11.7	11.7	3	12.3	12.2	12.4
	U.S. No. 4	N/A	--	--	--	--	--	--	--	--	1	9.8	9.8	9.8
	U.S. No. 5	N/A	--	--	--	--	--	--	--	--	1	13.4	13.4	13.4
	U.S. Sample Grade	N/A	--	--	--	--	--	--	--	--	5	13.2	13.0	13.5
	All lots	N/A	3	12.2	11.8	2.7	1	11.7	11.7	11.7	10	12.1	9.8	13.5
Heat-damaged Kernels	U.S. No. 2	0.2	3	0.0	0.0	0.0	1	0.0	0.0	0.0	3	0.0	0.0	0.0
	U.S. No. 4	1.0	--	--	--	--	--	--	--	--	1	0.0	0.0	0.0
	U.S. No. 5	3.0	--	--	--	--	--	--	--	--	1	0.5	0.5	0.5
	U.S. Sample Grade	N/A	--	--	--	--	--	--	--	--	5	0.0	0.0	0.1
	All lots	N/A	3	0.0	0.0	0.0	1	0.0	0.0	0.0	10	0.1	0.0	0.5
Damaged Kernels (Total)	U.S. No. 2	4.0	3	1.5	1.2	2.1	1	1.8	1.8	1.8	3	1.5	1.0	1.9
	U.S. No. 4	10.0	--	--	--	--	--	--	--	--	1	9.8	9.8	9.8
	U.S. No. 5	15.0	--	--	--	--	--	--	--	--	1	13.0	13.0	13.0
	U.S. Sample Grade	N/A	--	--	--	--	--	--	--	--	5	16.9	12.6	21.8
	All lots	N/A	3	1.5	1.2	2.1	1	1.8	1.8	1.8	10	13.1	1.0	21.8
Foreign Material	U.S. No. 2	0.5 ¹	3	0.2	0.1	0.3	1	0.2	0.2	0.2	3	0.2	0.2	0.2
	U.S. No. 4	3.0	--	--	--	--	--	--	--	--	1	0.2	0.2	0.2
	U.S. No. 5	5.0	--	--	--	--	--	--	--	--	1	0.2	0.2	0.2
	U.S. Sample Grade	N/A	--	--	--	--	--	--	--	--	5	0.2	0.1	0.3
	All lots	N/A	3	0.2	0.1	0.3	1	0.2	0.2	0.2	10	0.2	0.1	0.3

continued

Table 8. Summary of export Mixed wheat quality, 1991-93--Continued

Factor	Grade	1991					1992					1993			
		Grade No. of		No. of			Grade No. of		No. of						
		Lmlt	Lots	Avg.	Low	High	Lots	Avg.	Low	High	Lots	Avg.	Low	High	
Shrunken and Broken	U.S. No. 2	5.0	3	1.7	1.5	1.8	1	2.1	2.1	2.1	3	1.9	1.5	2.3	
	U.S. No. 4	12.0	--	--	--	--	--	--	--	--	1	1.5	1.5	1.5	
	U.S. No. 5	20.0	--	--	--	--	--	--	--	--	1	0.9	0.9	0.9	
	U.S. Sample Grade	N/A	--	--	--	--	--	--	--	--	5	1.2	1.0	1.3	
	All lots	N/A	3	1.7	1.5	1.8	1	2.1	2.1	2.1	10	1.3	0.9	2.3	
Total Defects	U.S. No. 2	5.0	3	3.4	2.9	4.2	1	4.1	4.1	4.1	3	3.6	2.7	4.4	
	U.S. No. 4	12.0	--	--	--	--	--	--	--	--	1	11.5	11.5	11.5	
	U.S. No. 5	20.0	--	--	--	--	--	--	--	--	1	14.1	14.1	14.1	
	U.S. Sample Grade	N/A	--	--	--	--	--	--	--	--	5	18.3	14.2	23.2	
	All lots	N/A	3	3.4	2.9	4.2	1	4.1	4.1	4.1	10	14.6	2.7	23.2	
Dockage	U.S. No. 2	N/A	3	0.6	0.5	0.7	1	0.9	0.9	0.9	3	0.7	0.6	0.9	
	U.S. No. 4	N/A	--	--	--	--	--	--	--	--	1	0.8	0.8	0.8	
	U.S. No. 5	N/A	--	--	--	--	--	--	--	--	1	0.9	0.9	0.9	
	U.S. Sample Grade	N/A	--	--	--	--	--	--	--	--	5	0.9	0.8	1.0	
	All lots	N/A	3	0.6	0.5	0.7	1	0.9	0.9	0.9	10	0.9	0.6	1.0	
Wheat of other classes	U.S. No. 2	5.0	3	0.0	0.0	0.0	1	0.0	0.0	0.0	3	0.0	0.0	0.0	
	U.S. No. 4	10.0	--	--	--	--	--	--	--	--	1	0.0	0.0	0.0	
	U.S. No. 5	10.0	--	--	--	--	--	--	--	--	1	0.0	0.0	0.0	
	U.S. Sample Grade	N/A	--	--	--	--	--	--	--	--	5	0.0	0.0	0.0	
	All lots	N/A	3	0.0	0.0	0.0	1	0.0	0.0	0.0	10	0.0	0.0	0.0	
Contrasting Classes	U.S. No. 2	2.0	3	0.0	0.0	0.0	1	0.0	0.0	0.0	3	0.0	0.0	0.0	
	U.S. No. 4	10.0	--	--	--	--	--	--	--	--	1	0.0	0.0	0.0	
	U.S. No. 5	10.0	--	--	--	--	--	--	--	--	1	0.0	0.0	0.0	
	U.S. Sample Grade	N/A	--	--	--	--	--	--	--	--	5	0.0	0.0	0.0	
	All lots	N/A	3	0.0	0.0	0.0	1	0.0	0.0	0.0	10	0.0	0.0	0.0	
Protein (as is basis)	U.S. No. 2	N/A	3	11.4	11.1	1.6	1	12.8	12.8	12.8	--	--	--	--	
	U.S. No. 4	N/A	--	--	--	--	--	--	--	--	--	--	--	--	
	U.S. No. 5	N/A	--	--	--	--	--	--	--	--	--	--	--	--	
	U.S. Sample Grade	N/A	--	--	--	--	--	--	--	--	--	--	--	--	
	All lots	N/A	3	11.4	11.1	1.6	1	12.8	12.8	12.8	--	--	--	--	
Protein (12% moisture)	U.S. No. 2	N/A	3	11.4	11.1	1.6	1	12.8	12.8	12.8	--	--	--	--	
	U.S. No. 4	N/A	--	--	--	--	--	--	--	--	--	--	--	--	
	U.S. No. 5	N/A	--	--	--	--	--	--	--	--	--	--	--	--	
	U.S. Sample Grade	N/A	--	--	--	--	--	--	--	--	--	--	--	--	
	All lots	N/A	3	11.4	11.1	1.6	1	12.8	12.8	12.8	--	--	--	--	

-- = No lots reported in this category.

¹ Effective May 1, 1993, the foreign material grade limit for U.S. No. 2 wheat was revised to 0.7 percent.

Export Corn

Corn Grades and Grade Requirements

Corn is divided into three classes: Yellow corn, White Corn, and Mixed corn. There are no subclasses of corn. Each class of corn is divided into five U.S. numerical grades

and U.S. Sample grade. Special grades are provided to emphasize the qualities or conditions affecting the value of the corn. These special grades are made a part of the grade designation but do not affect the numerical or Sample grade designation.

U.S. Standards for Corn

Grade	Minimum test weight per bushel (pounds)	Maximum limits of -		
		Damaged kernels		Broken corn and foreign material (percent)
		Heat-damaged kernels (percent)	Total damaged kernels (percent)	
U.S. No. 1	56.0	0.1	3.0	2.0
U.S. No. 2	54.0	0.2	5.0	3.0
U.S. No. 3	52.0	0.5	7.0	4.0
U.S. No. 4	49.0	1.0	10.0	5.0
U.S. No. 5	46.0	3.0	15.0	7.0
U.S. Sample grade				

U.S. Sample grade is corn that:

- (a) Does not meet the requirements for the grades U.S. Nos. 1, 2, 3, 4, or 5; or
- (b) In a 1,000-gram sample, contains 8 or more stones which have an aggregate weight in excess of 0.20 percent of the sample weight, 2 or more pieces of glass, 3 or more crotalaria seeds (*Crotalaria* spp.), 2 or more castor beans, 8 or more cockleburrs, 4 or more particles of an unknown foreign substance(s) or a commonly recognized harmful or toxic substance(s), or animal filth in excess of 0.20 percent; or
- (c) Has a musty, sour, or commercially objectionable foreign odor; or
- (d) Is heating or otherwise of distinctly low quality.

Definitions

Test weight (lb/bu) is pounds of grain per Winchester bushel.

Test weight (kg/hl) is the metric system equivalent to pounds per bushel. Kilograms per hectoliter are calculated by multiplying pounds per bushel by 1.287.

Moisture is the water content of grain as determined by an approved electronic moisture meter. The percentage of moisture in a sample does not affect the numerical grade.

Broken corn is all matter that passes readily through a 12/64-inch round-hole sieve and over a 6/64-inch round-hole sieve. The percentage of broken corn by itself does not affect the numerical grade.

Foreign material is all matter that passes readily through a 6/64-inch round-hole sieve and all matter other than corn that remains on top of the 12/64-inch round-hole sieve. The percentage of foreign material by itself does not affect the numerical grade.

Broken corn and foreign material is comprised of kernels and pieces of kernels of corn and all matter other than corn which will pass readily through a 12/64-inch sieve, and all matter other than corn which remains in the sieved sample.

Damaged kernels (total) are kernels and pieces of corn kernels that are badly ground-damaged, badly weather-damaged, diseased, frost-damaged, germ-damaged, heat-damaged, insect-bored, mold-damaged, sprout-damaged, or otherwise materially damaged.

Heat-damaged kernels are defined as kernels and pieces of kernels which are materially discolored by excessive respiration, with dark discoloration extending out of the germ, through the sides, and into the back of the kernel.

Mixed corn is a combination of classes of corn which does not meet the minimum requirements of a specific class.

Table 9. U.S. Corn Exports: Number of lots and quantity exported by class and grade, 1991-93

Class	Grade	1991		1992		1993	
		Number of Lots	Metric Tons	Number of Lots	Metric Tons	Number of Lots	Metric Tons
Yellow Corn	U.S. No. 1	45	146,971	58	408,624	26	103,752
	U.S. No. 2	723	15,241,799	963	20,064,580	711	14,680,586
	U.S. No. 3	931	29,075,314	716	22,454,623	788	23,899,804
	U.S. No. 4	10	16,924	4	26,463	49	598,704
	U.S. No. 5	--	--	1	79	5	3,271
	U.S. Sample grade	2	728	1	127	8	112,036
	Not Inspected	4	24,374	3	19,459	14	60,931
	All lots	1,715	44,506,110	1,746	42,973,955	1,601	39,459,084
White Corn	U.S. No. 1	2	9,353	9	15,670	9	20,718
	U.S. No. 2	19	133,072	52	580,147	33	400,160
	U.S. No. 3	1	1,093	3	8,814	2	9,413
	U.S. No. 4	--	--	--	--	2	1,320
	U.S. No. 5	--	--	--	--	--	--
	U.S. Sample grade	1	4,094	--	--	--	--
	All lots	23	147,612	64	604,631	46	431,611
All Classes	U.S. No. 1	47	156,324	67	424,294	35	124,470
	U.S. No. 2	742	15,374,871	1,015	20,644,727	744	15,080,746
	U.S. No. 3	932	29,076,407	719	22,463,437	790	23,909,217
	U.S. No. 4	10	16,924	4	26,463	51	600,024
	U.S. No. 5	--	--	1	79	5	3,271
	U.S. Sample grade	3	4,822	1	127	8	112,036
	Not Inspected	4	24,374	3	19,459	14	60,931
	All lots	1,738	44,653,722	1,810	43,578,586	1,647	39,890,695

-- = No lots reported in this category.

Not inspected = These lots were sold without grade designation.

Table 10. Summary of export Yellow corn quality, 1991-93

Factor	Grade	1991					1992				1993			
		Grade Limit	No. of Lots	Avg.	Low	High	No. of Lots	Avg.	Low	High	No. of Lots	Avg.	Low	High
Test Weight (lb/bu)	U.S. No. 1	56.0	18	57.3	56.1	59.2	53	57.9	56.5	59.5	14	58.4	56.1	60.1
	U.S. No. 2	54.0	647	56.5	54.5	60.4	917	57.0	54.0	59.8	660	55.9	54.0	60.6
	U.S. No. 3	52.0	911	56.6	52.5	63.6	707	56.9	52.1	59.5	777	55.3	52.0	60.2
	U.S. No. 4	49.0	7	53.3	50.5	56.4	3	52.7	52.3	58.5	43	55.7	51.6	60.4
	U.S. No. 5	46.0	--	--	--	--	--	--	--	--	3	55.8	55.6	56.0
	U.S. Sample Grade	N/A	1	52.5	52.5	52.5	1	57.3	57.3	57.3	8	51.9	47.0	56.5
	All lots	N/A	1,584	56.6	50.5	63.3	1,681	56.9	52.1	59.8	1,505	55.6	47.0	60.6
Test Weight (kg/hl)	U.S. No. 1	N/A	18	73.7	72.2	76.3	53	74.5	72.7	76.6	14	75.2	72.3	77.3
	U.S. No. 2	N/A	647	72.7	70.2	77.7	917	73.4	69.5	77.0	660	72.0	69.5	78.0
	U.S. No. 3	N/A	911	72.8	67.6	81.9	707	73.2	67.1	76.6	777	71.2	66.9	77.5
	U.S. No. 4	N/A	7	68.6	65.1	72.6	3	67.9	67.4	75.3	43	71.7	66.5	77.8
	U.S. No. 5	N/A	--	--	--	--	--	--	--	--	3	71.8	71.6	72.1
	U.S. Sample Grade	N/A	1	67.6	67.6	67.6	1	73.8	73.8	73.8	8	66.8	60.5	72.7
	All lots	N/A	1,584	72.8	65.1	81.9	1,681	73.3	67.1	77.0	1,505	71.5	60.5	78.0
Molsture	U.S. No. 1	N/A	18	14.3	13.6	4.9	53	14.1	13.3	15.0	14	14.5	13.6	14.9
	U.S. No. 2	N/A	647	14.3	12.5	5.3	917	14.1	12.6	15.4	660	14.4	12.0	15.3
	U.S. No. 3	N/A	911	14.5	13.4	5.4	707	14.3	13.0	15.4	777	14.6	13.4	15.4
	U.S. No. 4	N/A	7	14.6	14.0	5.4	3	14.9	14.9	15.5	43	14.2	13.4	14.8
	U.S. No. 5	N/A	--	--	--	--	--	--	--	--	3	14.1	13.9	14.9
	U.S. Sample Grade	N/A	1	14.4	14.4	14.4	1	13.9	13.9	13.9	8	15.4	14.2	15.5
	All lots	N/A	1,584	14.4	12.5	5.4	1,681	14.2	12.6	15.5	1,505	14.5	12.0	15.5
Heat-damaged Kernels	U.S. No. 1	0.1	18	0.0	0.0	0.0	53	0.0	0.0	0.0	14	0.0	0.0	0.0
	U.S. No. 2	0.2	647	0.0	0.0	0.1	917	0.0	0.0	0.1	660	0.0	0.0	0.1
	U.S. No. 3	0.5	911	0.0	0.0	0.2	707	0.0	0.0	0.2	777	0.0	0.0	0.2
	U.S. No. 4	1.0	7	0.0	0.0	0.0	3	0.0	0.0	0.0	43	0.0	0.0	0.0
	U.S. No. 5	3.0	--	--	--	--	--	--	--	--	3	0.0	0.0	0.0
	U.S. Sample Grade	N/A	1	0.0	0.0	0.0	1	0.0	0.0	0.0	8	0.0	0.0	0.0
	All lots	N/A	1,584	0.0	0.0	0.2	1,681	0.0	0.0	0.2	1,505	0.0	0.0	0.2
Damaged Kernels (Total)	U.S. No. 1	3.0	18	1.9	0.8	3.0	53	1.6	0.5	3.0	14	1.1	0.6	2.7
	U.S. No. 2	5.0	647	2.9	0.3	5.0	917	2.6	0.5	4.8	660	3.3	0.3	5.0
	U.S. No. 3	7.0	911	3.6	0.7	6.8	707	3.0	0.4	6.9	777	4.9	0.1	7.0
	U.S. No. 4	10.0	7	3.0	1.5	6.3	3	2.0	1.3	2.1	43	8.6	0.7	9.8
	U.S. No. 5	15.0	--	--	--	--	--	--	--	--	3	3.8	0.8	12.5
	U.S. Sample Grade	N/A	1	2.9	2.9	2.9	1	1.1	1.1	1.1	8	3.3	0.9	4.5
	All lots	N/A	1,584	3.3	0.3	6.8	1,681	2.8	0.4	6.9	1,505	4.3	0.1	12.5

continued

Table 10. Summary of export Yellow corn quality, 1991-93--Continued

Factor	Grade	1991					1992				1993			
		Grade Limit	No. of Lots	Avg.	Low	High	No. of Lots	Avg.	Low	High	No. of Lots	Avg.	Low	High
Broken Corn and Foreign Material	U.S. No. 1	2.0	18	1.7	0.5	2.0	53	1.7	1.2	2.0	6	1.7	1.3	1.9
	U.S. No. 2	3.0	647	2.7	0.8	3.0	917	2.7	0.9	3.0	356	2.8	1.2	3.0
	U.S. No. 3	4.0	911	3.5	1.4	4.0	707	3.5	1.4	4.0	243	3.6	2.0	3.9
	U.S. No. 4	5.0	7	2.8	1.3	4.6	3	4.2	4.2	4.4	5	3.8	3.4	4.7
	U.S. No. 5	7.0	--	--	--	--	--	--	--	--	--	--	--	--
	U.S. Sample Grade	N/A	1	1.8	1.8	1.8	1	2.3	2.3	2.3	2	32.5	31.3	34.8
	All lots	N/A	1,584	3.2	0.5	4.6	1,681	3.1	0.9	4.4	612	3.2	1.2	34.8
Broken Corn	U.S. No. 1	N/A	18	1.3	0.3	1.5	53	1.3	0.4	1.5	6	1.4	1.0	1.6
	U.S. No. 2	N/A	647	2.1	0.6	2.6	917	2.1	0.7	2.5	356	2.1	0.5	2.6
	U.S. No. 3	N/A	911	2.6	0.8	3.1	706	2.6	0.9	3.2	243	2.7	1.0	3.2
	U.S. No. 4	N/A	7	2.0	0.8	3.4	3	2.9	2.7	2.9	5	2.8	2.4	3.3
	U.S. No. 5	N/A	--	--	--	--	--	--	--	--	--	--	--	--
	U.S. Sample Grade	N/A	1	0.9	0.9	0.9	1	1.7	1.7	1.7	2	20.6	19.8	22.2
	All lots	N/A	1,584	2.4	0.3	3.4	1,680	2.3	0.4	3.2	612	2.4	0.5	22.2
Foreign Material	U.S. No. 1	N/A	18	0.4	0.2	0.7	53	0.4	0.2	1.0	14	0.2	0.0	0.4
	U.S. No. 2	N/A	647	0.7	0.1	2.3	917	0.7	0.2	2.0	660	0.4	0.0	1.8
	U.S. No. 3	N/A	911	0.9	0.4	3.0	706	0.9	0.4	1.4	777	0.3	0.0	2.6
	U.S. No. 4	N/A	7	0.9	0.5	1.2	3	1.3	1.3	1.7	43	0.1	0.0	1.4
	U.S. No. 5	N/A	--	--	--	--	--	--	--	--	3	0.0	0.0	0.0
	U.S. Sample Grade	N/A	1	0.9	0.9	0.9	1	0.6	0.6	0.6	8	2.1	0.0	12.6
	All lots	N/A	1,584	0.8	0.1	3.0	1,680	0.8	0.2	2.0	1,505	0.3	0.0	12.6

N/A = Does not apply.

-- = No lots reported in this category.

Table 11. Summary of export White corn quality, 1991-93

Factor	Grade	1991					1992					1993			
		Grade	No. of Lots	No. of			No. of Lots	No. of			No. of Lots	No. of			No. of Lots
				Limlt	Avg.	Low	High	Avg.	Low	High		Avg.	Low	High	
Test Weight (lb/bu)	U.S. No. 1		56.0	2	58.5	57.0	59.5	3	58.5	58.2	59.6	6	58.9	56.5	61.8
	U.S. No. 2		54.0	17	58.2	55.0	59.2	44	58.8	56.9	60.5	32	58.8	57.4	62.3
	U.S. No. 3		52.0	1	53.5	53.5	53.5	2	56.9	56.6	58.5	2	59.4	59.2	59.6
	U.S. No. 4		49.0	--	--	--	--	--	--	--	--	2	55.8	54.0	61.5
	U.S. Sample Grade		N/A	1	59.1	59.1	59.1	--	--	--	--	--	--	--	--
	All lots		N/A	21	58.2	53.5	59.5	49	58.8	56.6	60.5	42	58.8	54.0	62.3
Test Weight (kg/hl)	U.S. No. 1		N/A	2	75.4	73.4	76.6	3	75.4	75.0	76.7	6	75.9	72.7	79.5
	U.S. No. 2		N/A	17	74.9	70.8	76.2	44	75.7	73.3	77.9	32	75.7	73.9	80.1
	U.S. No. 3		N/A	1	68.9	68.9	68.9	2	73.2	72.9	75.3	2	76.4	76.2	76.7
	U.S. No. 4		N/A	--	--	--	--	--	--	--	--	2	71.8	69.5	79.2
	U.S. Sample Grade		N/A	1	76.1	76.1	76.1	--	--	--	--	--	--	--	--
	All lots		N/A	21	74.9	68.9	76.6	49	75.6	72.9	77.9	42	75.7	69.5	80.1
Moisture	U.S. No. 1		N/A	2	13.5	13.5	13.6	3	13.4	13.2	14.2	6	13.9	13.4	14.2
	U.S. No. 2		N/A	17	13.7	13.0	14.6	44	13.7	12.7	14.8	32	13.8	12.7	14.7
	U.S. No. 3		N/A	1	14.4	14.4	14.4	2	13.5	13.4	13.5	2	14.2	14.1	14.3
	U.S. No. 4		N/A	--	--	--	--	--	--	--	--	2	14.6	14.2	14.7
	U.S. Sample Grade		N/A	1	14.0	14.0	14.0	--	--	--	--	--	--	--	--
	All lots		N/A	21	13.7	13.0	14.6	49	13.7	12.7	14.8	42	13.8	12.7	14.7
Heat-damaged Kernels	U.S. No. 1		0.1	2	0.0	0.0	0.0	3	0.0	0.0	0.0	6	0.0	0.0	0.0
	U.S. No. 2		0.2	17	0.0	0.0	0.0	44	0.0	0.0	0.0	32	0.0	0.0	0.0
	U.S. No. 3		0.5	1	0.0	0.0	0.0	2	0.0	0.0	0.0	2	0.0	0.0	0.0
	U.S. No. 4		1.0	--	--	--	--	--	--	--	--	2	0.0	0.0	0.0
	U.S. Sample Grade		N/A	1	0.0	0.0	0.0	--	--	--	--	--	--	--	--
	All lots		N/A	21	0.0	0.0	0.0	49	0.0	0.0	0.0	42	0.0	0.0	0.0
Damaged Kernels (Total)	U.S. No. 1		3.0	2	1.5	1.3	1.7	3	1.6	0.6	1.7	6	1.2	0.5	1.7
	U.S. No. 2		5.0	17	1.5	0.5	3.3	44	1.4	0.5	4.7	32	2.0	0.5	5.0
	U.S. No. 3		7.0	1	1.7	1.7	1.7	2	0.7	0.7	1.0	2	1.9	1.2	2.7
	U.S. No. 4		10.0	--	--	--	--	--	--	--	--	2	3.5	2.7	6.1
	U.S. Sample Grade		N/A	1	0.8	0.8	0.8	--	--	--	--	--	--	--	--
	All lots		N/A	21	1.5	0.5	3.3	49	1.3	0.5	4.7	42	2.0	0.5	6.1

continued

Table 11. Summary of export White corn quality, 1991-93--Continued

Factor	Grade	1991					1992					1993			
		Grade No. of Limit	No. of Lots	Avg.	Low	High	No. of Lots	Avg.	Low	High	No. of Lots	Avg.	Low	High	
Broken Corn and Foreign Material	U.S. No. 1	2.0	2	1.2	1.0	1.5	3	1.5	0.4	1.7	3	1.4	0.6	1.7	
	U.S. No. 2	3.0	17	2.2	1.3	2.8	44	2.3	1.1	3.0	11	2.1	1.2	2.9	
	U.S. No. 3	4.0	1	2.1	2.1	2.1	2	3.1	3.1	4.0	1	2.0	2.0	2.0	
	U.S. No. 4	5.0	--	--	--	--	--	--	--	--	--	--	--	--	
	U.S. Sample Grade	N/A	1	2.1	2.1	2.1	--	--	--	--	--	--	--	--	
	All lots	N/A	21	2.1	1.0	2.8	49	2.3	0.4	0.4	15	2.0	0.6	2.9	
Broken Corn	U.S. No. 1	N/A	2	1.0	0.8	1.2	3	1.2	0.3	1.3	3	1.0	0.4	1.4	
	U.S. No. 2	N/A	17	1.6	1.0	2.3	44	1.7	0.7	2.5	11	1.6	0.9	2.2	
	U.S. No. 3	N/A	1	1.5	1.5	1.5	2	2.8	2.7	3.2	1	1.6	1.6	1.6	
	U.S. No. 4	N/A	--	--	--	--	--	--	--	--	--	--	--	--	
	U.S. Sample Grade	N/A	1	1.6	1.6	1.6	--	--	--	--	--	--	--	--	
	All lots	N/A	21	1.6	0.8	2.3	49	1.7	0.3	3.2	15	1.5	0.4	2.2	
Foreign Material	U.S. No. 1	N/A	2	0.2	0.2	0.3	3	0.3	0.1	0.7	6	0.2	0.0	0.5	
	U.S. No. 2	N/A	17	0.6	0.3	0.8	44	0.6	0.3	1.5	32	0.2	0.0	0.8	
	U.S. No. 3	N/A	1	0.6	0.6	0.6	2	0.5	0.4	0.8	2	0.2	0.0	0.4	
	U.S. No. 4	N/A	--	--	--	--	--	--	--	--	2	0.0	0.0	0.0	
	U.S. Sample Grade	N/A	1	0.5	0.5	0.5	--	--	--	--	--	--	--	--	
	All lots	N/A	21	0.5	0.2	0.8	49	0.6	0.1	1.5	42	0.2	0.0	0.8	

N/A = Does not apply.

-- = No lots reported in this category.

Export Soybeans

Soybean Grades and Grade Requirements

There are two classes of soybeans: Yellow soybeans and Mixed soybeans. There are no soybean subclasses. The class Yellow soybeans is the class most commonly exported by the U.S. market. Each class is divided into four U.S. numerical grades and U.S. Sample grade.

Special grades are provided to emphasize special qualities or conditions affecting the value of the soybeans. These special grades are a part of the grade designation but do not affect the numerical or Sample grade designation.

U.S. Standards for Soybeans

Grade	Minimum test weight per bushel (pounds)	Maximum limits of -				
		Damaged kernels		Foreign Material (percent)	Splits (percent)	Soybeans of other colors ¹ (percent)
		Heat-damaged kernels (percent)	Total damaged kernels (percent)			
U.S. No. 1	56.0	0.2	2.0	1.0	10.0	1.0
U.S. No. 2	54.0	0.5	3.0	2.0	20.0	2.0
U.S. No. 3	52.0	1.0	5.0	3.0	30.0	5.0
U.S. No. 4	49.0	3.0	8.0	5.0	40.0	10.0
U.S. Sample grade						

U.S. Sample grade shall be soybeans which:

- Do not meet the requirements for U.S. Nos. 1, 2, 3, or 4; or
- Contain 4 or more stones which have an aggregate weight in excess of 0.1 percent of the sample weight, 1 or more pieces of broken glass, 3 or more crotalaria seeds, 2 or more castor beans, 4 or more particles of an unknown foreign substance(s) or a commonly recognized harmful or toxic foreign substance(s), 10 or more rodent pellets, bird droppings, or an equivalent quantity of other animal filth, 11 or more pieces of animal filth, castor beans, crotalaria seeds, glass, stones, or unknown foreign substance in combination, per 1,000 grams of soybeans; or
- Have a musty, sour, or commercially objectionable foreign odor (except garlic odor); or
- Are heating or otherwise of distinctly low quality.

¹ Does not apply to Mixed soybeans.

Soybeans

Definitions

Test weight (lb/bu) is pounds of grain per Winchester bushel.

Test weight (kg/hl) is the metric system equivalent to pounds per bushel. Kilograms per hectoliter are calculated by multiplying pounds per bushel by 1.287.

Moisture is the water content of grain as determined by an approved electronic moisture meter. The percentage of moisture in a sample does not affect the numerical grade.

Splits are soybeans with more than one-fourth of the bean removed and which are not damaged.

Damaged kernels are soybeans and pieces of soybeans which are badly ground-damaged, badly weather-damaged, diseased, frost-damaged, heat-damaged, insect-bored, mold-damaged, sprout damaged, stinkbug-stung, or otherwise materially damaged.

Heat-damaged kernels are soybeans and pieces of soybeans which are materially discolored and damaged by heat.

Foreign material is all matter, including soybeans and pieces of soybeans, that will pass readily through an 8/64-inch sieve and all matter other than soybeans remaining on the sieve after sieving.

Soybeans of other colors are soybeans which have green, black, brown, or bicolored seed coats. Before September 9, 1985, this factor was called "brown, black, and/or bicolored soybeans in yellow or green soybeans."

Mixed soybeans is a combination of classes of soybeans which does not meet the minimum requirements of a specific class.

Table 12. U.S. Soybean Exports: Number of lots and quantity exported by class and grade, 1991-93

Grade	1991		1992		1993	
	Number of Lots	Metric Tons	Number of Lots	Metric Tons	Number of Lots	Metric Tons
U.S. No. 1	103	225,630	289	571,281	117	781,909
U.S. No. 2	936	16,176,728	1,023	19,268,954	1,107	17,538,262
U.S. No. 3	39	966,939	36	755,459	53	1,023,958
U.S. No. 4	2	8,808	6	4,407	4	17,986
U.S. Sample grade	2	1,641	3	331	1	4,532
Not inspected	1	3,920	1	4,620	2	1,157
All lots	1,083	17,383,666	1,358	20,604,952	1,284	19,367,804

Not inspected = These lots were sold without grade designation.

Table 13. Summary of export Soybean quality, 1991-93

Factor	Grade	1991					1992				1993			
		Grade No. of					No. of				No. of			
		Limit	Lots	Avg.	Low	High	Lots	Avg.	Low	High	Lots	Avg.	Low	High
Test Weight (lb/bu)	U.S. No. 1	56.0	103	56.5	56.0	58.5	262	56.8	56.0	58.1	75	56.8	56.0	58.7
	U.S. No. 2	54.0	808	56.3	54.0	58.1	893	56.3	54.6	58.7	860	56.4	54.5	58.2
	U.S. No. 3	52.0	22	56.0	54.9	57.0	24	56.0	54.7	56.7	25	56.3	52.6	56.9
	U.S. No. 4	49.0	2	54.9	54.4	57.1	2	55.9	55.2	56.9	1	57.3	57.3	57.3
	U.S. Sample grade	N/A	2	57.0	56.3	57.2	2	55.1	55.0	55.2	1	50.5	50.5	50.5
	All lots	N/A	937	56.3	54.0	58.5	1,183	56.3	54.6	58.7	962	56.4	50.5	58.7
Test Weight (kg/hl)	U.S. No. 1	N/A	103	72.8	72.1	75.3	262	73.1	72.1	74.8	75	73.2	72.1	75.6
	U.S. No. 2	N/A	808	72.5	69.5	74.8	893	72.4	70.3	75.6	860	72.7	70.2	75.0
	U.S. No. 3	N/A	22	72.0	70.7	73.4	24	72.0	70.4	73.0	25	72.5	67.7	73.2
	U.S. No. 4	N/A	2	70.7	70.1	73.5	2	72.0	71.1	73.3	1	73.8	73.8	73.8
	U.S. Sample grade	N/A	2	73.3	72.5	73.6	2	70.9	70.8	71.1	1	65.0	65.0	65.0
	All lots	N/A	937	72.5	69.5	75.3	1,183	72.4	70.3	75.6	962	72.7	65.0	75.6
Moisture	U.S. No. 1	N/A	103	11.9	8.4	13.4	262	11.3	10.0	14.4	75	12.0	10.4	14.7
	U.S. No. 2	N/A	808	12.1	9.3	13.9	893	12.0	8.9	13.9	860	12.5	9.6	14.0
	U.S. No. 3	N/A	22	12.4	11.9	13.3	24	12.2	9.4	13.7	25	12.7	11.5	13.9
	U.S. No. 4	N/A	2	12.6	12.3	12.7	2	13.2	13.1	13.4	1	13.2	13.2	13.2
	U.S. Sample grade	N/A	2	11.6	11.4	12.3	2	12.4	11.8	13.1	1	11.5	11.5	11.5
	All lots	N/A	937	12.1	8.4	13.9	1,183	12.0	8.9	14.4	962	12.5	9.6	14.7
Heat-damaged Kernels	U.S. No. 1	0.2	103	0.0	0.0	0.1	262	0.0	0.0	0.2	75	0.0	0.0	0.1
	U.S. No. 2	0.5	808	0.1	0.0	0.4	893	0.1	0.0	0.4	860	0.1	0.0	0.5
	U.S. No. 3	1.0	22	0.2	0.0	0.5	24	0.1	0.0	0.4	25	0.2	0.0	0.7
	U.S. No. 4	3.0	2	0.1	0.0	0.1	2	0.2	0.0	0.4	1	0.2	0.2	0.2
	U.S. Sample grade	N/A	2	0.0	0.0	0.0	2	0.2	0.0	0.5	1	0.0	0.0	0.0
	All lots	N/A	937	0.1	0.0	0.5	1,183	0.1	0.0	0.5	962	0.1	0.0	0.7
Damaged Kernels (Total)	U.S. No. 1	2.0	103	0.7	0.0	2.0	262	0.9	0.0	2.0	75	0.7	0.0	2.0
	U.S. No. 2	3.0	808	1.1	0.0	2.7	893	1.2	0.1	2.8	860	1.0	0.0	2.7
	U.S. No. 3	5.0	22	1.4	0.9	3.1	24	1.4	0.9	2.5	25	1.4	0.2	3.0
	U.S. No. 4	8.0	2	3.6	0.8	4.2	2	3.3	1.0	5.1	1	0.9	0.9	0.9
	U.S. Sample grade	N/A	2	0.6	0.4	0.7	2	1.8	0.7	3.1	1	2.9	2.9	2.9
	All lots	N/A	937	1.1	0.0	4.2	1,183	1.2	0.0	5.1	962	1.1	0.0	3.0

continued

Table 13. Summary of export Soybean quality, 1991-93--Continued

Factor	Grade	1991					1992				1993			
		Grade No. of	No. of				No. of				No. of			
		Lmlt	Lots	Avg.	Low	High	Lots	Avg.	Low	High	Lots	Avg.	Low	High
Foreign Material	U.S. No. 1	1.0	103	0.7	0.0	1.0	262	0.8	0.0	1.0	75	0.8	0.0	1.0
	U.S. No. 2	2.0	808	1.7	0.0	2.0	893	1.7	0.1	2.0	860	1.7	0.0	2.0
	U.S. No. 3	3.0	22	2.8	1.9	3.0	24	2.6	1.4	3.0	25	2.6	0.8	3.0
	U.S. No. 4	5.0	2	2.2	1.9	3.3	2	2.9	1.7	4.5	1	1.7	1.7	1.7
	U.S. Sample Grade	N/A	2	0.5	0.1	0.6	2	1.2	1.0	1.4	1	22.2	22.2	22.2
	All lots	N/A	937	1.7	0.0	3.3	1,183	1.7	0.0	4.5	962	1.7	0.0	22.2
Spllts	U.S. No. 1	10.0	103	6.1	0.0	10.0	262	7.3	0.0	10.0	75	6.2	0.0	10.0
	U.S. No. 2	20.0	808	7.9	0.0	19.0	893	8.3	0.0	20.0	860	7.4	0.0	20.0
	U.S. No. 3	30.0	22	7.2	4.0	10.0	24	8.8	3.0	18.0	25	8.3	4.0	21.0
	U.S. No. 4	40.0	2	8.0	8.0	8.0	2	7.2	5.0	9.0	1	5.0	5.0	5.0
	U.S. Sample Grade	N/A	2	5.3	3.0	6.0	2	11.7	10.0	13.0	1	42.0	42.0	42.0
	All lots	N/A	937	7.8	0.0	19.0	1,183	8.3	0.0	20.0	962	7.4	0.0	42.0
Soybeans of Other Colors	U.S. No. 1	1.0	103	0.0	0.0	0.8	262	0.1	0.0	1.4	75	0.0	0.0	0.3
	U.S. No. 2	2.0	808	0.0	0.0	2.0	893	0.1	0.0	1.9	860	0.0	0.0	0.5
	U.S. No. 3	5.0	22	0.0	0.0	0.2	24	0.1	0.0	0.9	25	0.0	0.0	0.1
	U.S. No. 4	10.0	2	0.0	0.0	0.1	2	0.2	0.2	0.2	1	0.0	0.0	0.0
	U.S. Sample Grade	N/A	2	0.2	0.0	0.2	2	1.1	0.3	1.8	1	0.0	0.0	0.0
	All lots	N/A	937	0.0	0.0	2.0	1,183	0.1	0.0	1.9	962	0.0	0.0	0.5
Protein (adjusted to 13% moisture)	U.S. No. 1	N/A	26	35.5	32.0	38.9	30	35.4	32.5	37.9	59	35.5	33.5	38.5
	U.S. No. 2	N/A	400	35.5	33.5	38.7	501	35.2	30.5	37.5	515	35.4	33.2	38.7
	U.S. No. 3	N/A	18	35.4	34.8	36.5	14	35.1	34.2	36.0	16	35.2	35.0	35.7
	U.S. No. 4	N/A	2	36.4	35.4	36.6	1	36.2	36.2	36.2	1	36.2	36.2	36.2
	U.S. Sample Grade	N/A	1	37.1	37.1	37.1	1	36.0	36.0	36.0	--	--	--	--
	All lots	N/A	447	35.5	32.0	38.9	547	35.2	30.5	37.9	591	35.4	33.2	38.7
Oil (adjusted to 13% moisture)	U.S. No. 1	N/A	26	18.7	16.9	21.5	30	18.4	16.5	19.9	55	18.0	16.2	20.2
	U.S. No. 2	N/A	404	19.0	17.2	20.3	501	18.9	14.9	20.4	520	18.4	16.3	19.3
	U.S. No. 3	N/A	18	18.9	18.1	19.5	14	19.0	18.4	19.5	16	18.3	17.0	18.6
	U.S. No. 4	N/A	2	19.2	18.6	19.3	1	18.4	18.4	18.4	1	17.6	17.6	17.6
	U.S. Sample Grade	N/A	1	18.3	18.3	18.3	1	18.4	18.4	18.4	--	--	--	--
	All lots	N/A	451	19.0	16.9	21.5	547	18.9	14.9	20.4	592	18.3	16.2	20.2

N/A = Does not apply.

-- = No lots reported in this category.

Other Grain Exports

Sorghum

Sorghum Grades and Grade Requirements

Sorghum is divided into four classes based on color: White sorghum, Yellow sorghum, Brown sorghum, and Mixed sorghum. There are no subclasses in sorghum. Each class is divided into four numerical grades and U.S. Sample grade.

Special grades are provided to emphasize special qualities or conditions affecting the value of sorghum. Special grades are added to and made a part of the grade designation. They do not affect the numerical or Sample grade designation.

U.S. Standards for Sorghum

Grade	Minimum test weight per bushel (pounds)	Maximum limits of -		
		Damaged kernels		Broken kernels, foreign material, and other grains (percent)
		Heat-damaged kernels (percent)	Total damaged kernels (percent)	
U.S. No. 1	57.0	0.2	2.0	4.0
U.S. No. 2	55.0	0.5	5.0	7.0
U.S. No. 3 ¹	53.0	1.0	10.0	10.0
U.S. No. 4	51.0	3.0	15.0	13.0
U.S. Sample grade				

U.S. Sample grade is sorghum that:

- (a) Does not meet the requirements for the grades U.S. Nos. 1, 2, 3, or 4; or
- (b) Contains 8 or more stones which have an aggregate weight in excess of 0.2 percent of the sample weight, 2 or more pieces of glass, 3 or more crotalaria seeds (*Crotalaria* spp.), 2 or more castor beans (*Ricinus communis* L.), 4 or more particles of an unknown foreign substance(s) or a commonly recognized harmful or toxic substance(s), 8 or more cockleburs (*Xanthium* spp.) or similar seeds singly or in combination, 10 or more rodent pellets, bird droppings, or equivalent quantity of other animal filth per 1,000 grams of sorghum; or
- (c) Has a musty, sour, or commercially objectionable foreign odor (except smut odor); or
- (d) Is badly weathered, heating, or of distinctly low quality.

¹ Sorghum which is distinctly discolored shall be graded not higher than U.S. No. 3.

Sorghum

Definitions

Test weight (lb/bu) is pounds of grain per Winchester bushel.

Test weight (kg/hl) is the metric system equivalent to pounds per bushel. Kilograms per hectoliter are calculated by multiplying pounds per bushel by 1.287.

Heat-damaged kernels are kernels, pieces of sorghum kernels, and other grains that are materially discolored and damaged by heat.

Damaged kernels are kernels, pieces of sorghum kernels, and other grains that are badly ground-damaged, badly weather-damaged, diseased, frost-damaged, germ-damaged, heat-damaged, insect-bored, mold-damaged, sprout-damaged, or otherwise materially damaged.

Foreign material is all matter except sorghum, which passes over the number 6 riddle and all matter other than sorghum that remains on the top of the 5/64 triangular-hole sieve.

Broken kernels consist of all matter which passes through a 5/64 triangular-hole sieve and over a 2.5/64 round-hole sieve.

Broken kernels, foreign material, and other grains consist of all matter, other than dockage, that passes through a 5/64 triangular-hole sieve and all matter other than sorghum that remains in the sieved sample.

Dockage is all matter other than sorghum that can be removed from the original sample by use of an approved device. Also, underdeveloped, shriveled, and small pieces of sorghum kernels removed in properly separating the material other than sorghum.

Moisture is the water content of grain as determined by an approved electronic moisture meter. The percentage of moisture in a sample does not affect the numerical grade.

Mixed sorghum is a combination of classes of sorghum which does not meet the minimum requirements of a specific class.

Table 14. U.S. Sorghum Exports: Number of lots and quantity exported by class and grade, 1991-93

Class	Grade	1991		1992		1993	
		Number of Lots	Metric Tons	Number of Lots	Metric Tons	Number of Lots	Metric Tons
Yellow sorghum	U.S. No. 1	15	11,114	30	27,544	3	1,826
	U.S. No. 2	568	5,186,785	734	6,415,679	376	3,198,029
	U.S. No. 3	--	--	1	79	1	1,032
	U.S. Sample Grade	--	--	2	1,509	--	--
	All lots	583	5,197,899	767	6,444,811	380	3,200,887
White sorghum	U.S. No. 1	1	1,135	--	--	1	79
	All lots	1	1,135	--	--	1	79
All Classes	U.S. No. 1	16	12,249	30	27,544	4	1,905
	U.S. No. 2	568	5,186,785	734	6,415,679	596	5,106,886
	U.S. No. 3	--	--	1	79	2	1,667
	U.S. Sample Grade	--	--	2	1,509	--	--
	All lots	584	5,199,034	767	6,448,811	602	5,110,458

-- = No lots reported in this category.

Table 15. Summary of export Sorghum quality, 1991-93

Factor	Grade	1991					1992					1993			
		Grade Limit	No. of Lots	No. of			No. of Lots	No. of			No. of Lots	No. of			
				Avg.	Low	High		Avg.	Low	High		Avg.	Low	High	
Test Weight (lb/bu)	U.S. No. 1	57.0	1	58.5	58.5	58.5	--	--	--	--	--	--	--	--	--
	U.S. No. 2	55.0	340	58.1	56.4	59.5	399	58.3	55.3	60.3	329	58.1	55.4	60.0	
	U.S. No. 3	53.0	--	--	--	--	--	--	--	--	--	--	--	--	--
	All lots	N/A	341	58.1	56.4	59.5	399	58.3	55.3	60.3	329	58.1	55.4	60.0	
Test Weight (kg/hl)	U.S. No. 1	N/A	1	75.3	75.3	75.3	--	--	--	--	--	--	--	--	--
	U.S. No. 2	N/A	340	74.8	72.6	76.5	399	75.1	71.2	77.6	329	74.8	71.3	77.2	
	U.S. No. 3	N/A	--	--	--	--	--	--	--	--	--	--	--	--	--
	All lots	N/A	341	74.8	72.6	76.5	399	75.1	71.2	77.6	329	74.8	71.3	77.2	
Moisture	U.S. No. 1	N/A	1	13.3	13.3	13.3	--	--	--	--	--	--	--	--	--
	U.S. No. 2	N/A	340	13.4	12.2	14.0	399	13.3	11.8	14.7	329	13.7	12.7	14.2	
	U.S. No. 3	N/A	--	--	--	--	--	--	--	--	--	--	--	--	--
	All lots	N/A	341	13.4	12.2	14.0	399	13.3	11.8	14.7	329	13.7	12.7	14.2	
Heat-damaged Kernels	U.S. No. 1	0.2	1	0.0	0.0	0.0	--	--	--	--	--	--	--	--	--
	U.S. No. 2	0.5	340	0.0	0.0	0.1	399	0.0	0.0	0.3	329	0.0	0.0	0.1	
	U.S. No. 3	1.0	--	--	--	--	--	--	--	--	--	--	--	--	--
	All lots	N/A	341	0.0	0.0	0.1	399	0.0	0.0	0.3	329	0.0	0.0	0.1	
Damaged Kernels (Total)	U.S. No. 1	2.0	1	2.0	2.0	2.0	--	--	--	--	--	--	--	--	--
	U.S. No. 2	5.0	340	1.7	0.1	4.1	399	1.8	0.1	4.7	329	2.1	0.0	4.6	
	U.S. No. 3	10.0	--	--	--	--	--	--	--	--	--	--	--	--	--
	All lots	N/A	341	1.7	0.1	4.1	399	1.8	0.1	4.7	329	2.1	0.0	4.6	
Broken Kernels and Foreign Material	U.S. No. 1	4.0	1	2.8	2.8	2.8	--	--	--	--	--	--	--	--	--
	U.S. No. 2	7.0	340	5.3	3.1	7.8	399	5.1	3.0	7.9	329	5.3	1.0	7.3	
	U.S. No. 3	10.0	--	--	--	--	--	--	--	--	--	--	--	--	--
	All lots	N/A	341	5.3	2.8	7.8	399	5.1	3.0	7.9	329	5.3	1.0	7.3	
Broken Kernels	U.S. No. 1	N/A	1	2.5	2.5	2.5	--	--	--	--	--	--	--	--	--
	U.S. No. 2	N/A	340	3.7	1.5	6.6	399	3.4	1.4	5.9	124	3.7	2.6	4.9	
	U.S. No. 3	N/A	--	--	--	--	--	--	--	--	--	--	--	--	--
	All lots	N/A	341	3.7	1.5	6.6	399	3.4	1.4	5.9	124	3.7	2.6	4.9	
Foreign Material	U.S. No. 1	N/A	1	0.3	0.3	0.3	--	--	--	--	--	--	--	--	--
	U.S. No. 2	N/A	340	1.7	0.7	3.8	399	1.6	0.6	4.0	124	1.6	0.7	3.2	
	U.S. No. 3	N/A	--	--	--	--	--	--	--	--	--	--	--	--	--
	All lots	N/A	341	1.7	0.3	3.8	399	1.6	0.6	4.0	124	1.6	0.7	3.2	
Dockage	U.S. No. 1	N/A	1	0.1	0.1	0.1	--	--	--	--	--	--	--	--	--
	U.S. No. 2	N/A	340	0.3	0.1	1.0	399	0.3	0.0	0.9	329	0.3	0.0	0.5	
	U.S. No. 3	N/A	--	--	--	--	--	--	--	--	--	--	--	--	--
	All lots	N/A	341	0.3	0.1	1.0	399	0.3	0.0	0.9	329	0.3	0.0	0.5	

N/A = Does not apply.

-- = No lots reported in this category.

Barley

Barley Grades and Grade Requirements

Barley is divided into three classes based on kernel characteristics: Six-rowed barley, Two-rowed barley, and Barley. The class Barley has no subclasses. Six-rowed barley is divided into 3 subclasses and Two-Rowed barley is divided into 2 subclasses. Six-rowed Malting barley is divided into three numerical grades. All classes of barley

not designated as "malting" are examined for quality under the standards for Barley. Special grades are provided to emphasize special qualities or conditions affecting the value of barley and are added to and made a part of the grade designation. They do not affect the numerical or Sample grade designation.

Grades and grade requirements for the subclasses Six-rowed Malting barley and Six-rowed Blue Malting barley

Grade	Minimum limits of -			Maximum limits of -				
	Test weight per bushel (pounds)	Suitable malting type (percent)	Sound barley ¹ (percent)	Damaged kernels ¹ (percent)	Foreign Material (percent)	Other grains (percent)	Skinned and broken kernels (percent)	Thin barley (percent)
U.S. No. 1	47.0	95.0	97.0	2.0	1.0	2.0	4.0	7.0
U.S. No. 2	45.0	95.0	94.0	3.0	2.0	3.0	6.0	10.0
U.S. No. 3	43.0	95.0	90.0	4.0	3.0	5.0	8.0	15.0

¹ Injured-by-frost kernels and injured-by-mold kernels are not considered damaged kernels or scored against sound barley.

NOTE: Six-rowed barley that meets the requirements of U.S. No. 1 to U.S. No. 3, inclusive, for the subclasses Six-rowed Malting barley and Six-rowed Blue Malting barley is classified and graded according to the requirements in this section. Otherwise, it will be graded according to the requirements in the table for Six-rowed barley, Two-rowed barley, and Barley.

Grades and grade requirements for the subclass Two-rowed Malting barley

Grade	Minimum limits of -			Maximum limits of -			
	Test weight per bushel (pounds)	Suitable malting type (percent)	Sound barley ¹ (percent)	Wild Oats (percent)	Foreign Material (percent)	Skinned and broken kernels (percent)	Thin barley (percent)
U.S. No. 1 Choice	50.0	97.0	98.0	1.0	0.5	5.0	5.0
U.S. No. 1	48.0	97.0	98.0	1.0	0.5	7.0	7.0
U.S. No. 2	48.0	95.0	96.0	2.0	1.0	10.0	10.0
U.S. No. 3	48.0	95.0	93.0	3.0	2.0	10.0	10.0

¹ Injured-by-frost kernels and injured-by-mold kernels are not scored against sound barley.

NOTE: Two-rowed barley that meets the requirements of U.S. No. 1 Choice to U.S. No. 3, inclusive, for the subclass Two-rowed Malting barley is classified and graded according to the requirements in this section. Otherwise, it will be graded according to the requirements in the table for Six-rowed barley, Two-rowed barley, and Barley.

Grades and grade requirements for the subclasses Six-rowed barley, Two-rowed barley and the class Barley

Grade	Minimum limits of -		Maximum limits of -				
	Test weight per bushel (pounds)	Sound barley (percent)	Damaged kernels ¹ (percent)	Heat-damaged kernels (percent)	Foreign Material (percent)	Broken kernels (percent)	Thin barley (percent)
U.S. No. 1	47.0	97.0	2.0	0.2	1.0	4.0	10.0
U.S. No. 2	45.0	94.0	4.0	0.3	2.0	8.0	15.0
U.S. No. 3	43.0	90.0	6.0	0.5	3.0	12.0	25.0
U.S. No. 4 ²	40.0	85.0	8.0	1.0	4.0	18.0	35.0
U.S. No. 5	36.0	75.0	10.0	3.0	5.0	28.0	75.0
U.S. Sample grade							

U.S. Sample grade shall be barley that:

- (a) Does not meet the requirements for the grades U.S. No. 1, 2, 3, 4, or 5; or
- (b) Contains 8 or more stones or any number of stones which have an aggregate weight in excess of 0.2 percent of the sample weight, 2 or more pieces of glass, 3 or more crotalaria seeds (*Crotalaria* spp.), 2 or more castor beans (*Ricinus communis* L.), 4 or more particles of an unknown foreign substance(s) or a commonly recognized harmful or toxic substance(s), 8 or more cocklebur (*Xanthium* spp.) or similar seeds singly or in combination, 10 or more rodent pellets, bird droppings, or equivalent quantity of other animal filth per 1-1/8 to 1-1/4 quarts of barley; or
- (c) Has a musty, sour, or commercially objectionable foreign odor (except smut or garlic odor); or
- (d) Is heating or otherwise of distinctly low quality.

- 1 Includes heat-damaged kernels. Injured-by-frost kernels and injured-by-mold kernels are not considered damaged kernels.
- 2 Barley that is badly stained or materially weathered shall be graded not higher than U.S. No. 4.

Barley

Definitions

Test weight (lb/bu) is pounds of grain per Winchester bushel.

Test weight (kg/hl) is the metric system equivalent to pounds per bushel. Kilograms per hectoliter are calculated by multiplying pounds per bushel by 1.287.

Heat-damaged kernels are kernels and pieces of barley kernels, other grains, and wild oats that are materially discolored and damaged by heat.

Damaged kernels are kernels, pieces of barley kernels, other grains, and wild oats that are badly ground-damaged, badly weather-damaged, diseased, frost-damaged, germ-damaged, heat-damaged, injured-by-heat, insect-bored, mold-damaged, sprout-damaged, or otherwise materially damaged.

Foreign material is all matter other than barley, other grains, and wild oats that remains in the sample after removal of dockage.

Skinned and broken kernels are barley kernels that have one-third or more of the hull removed, or that the hull is loose or missing over the germ, or broken kernels, or whole kernels that have a part or all of the germ missing.

Dockage is all matter other than barley that can be removed from the original sample by use of an approved device. Also, underdeveloped, shriveled, and small pieces of barley kernels removed by properly separating the material other than barley and that cannot be recovered by properly rescreening or recleaning.

Moisture is the water content of grain as determined by an approved electronic moisture meter. The percentage of moisture in a sample does not affect the numerical grade.

Suitable malting type refers to varieties of malting barley that are recommended by the American Malting Barley Association as being suitable for malting purposes.

Sound barley is kernels and pieces of barley kernels that are not damaged.

Thin barley is Six-rowed barley which passes through a $5/64 \times 3/4$ slotted-hole sieve and Two-rowed barley which passes through a $5.5/64 \times 3/4$ slotted-hole sieve.

Table 16. U.S. Barley Exports: Number of lots and quantity exported by class and grade, 1991-93

Class	Grade	1991		1992		1993	
		Number of Lots	Metric Tons	Number of Lots	Metric Tons	Number of Lots	Metric Tons
Barley	U.S. No. 2	80	1,342,381	109	1,652,279	76	1,032,521
	U.S. No. 3	4	101,514	8	205,821	11	295,972
	All lots	84	1,443,895	117	1,858,100	87	1,328,493
Six-rowed* barley	U.S. No. 1	5	1,768	4	680	--	--
	U.S. No. 2	7	5,710	7	3,060	6	51,158
	U.S. No. 3	1	68	2	544	2	6,785
	U.S. No. 4	--	--	--	--	1	68
	All lots	13	7,546	13	4,284	9	58,011
Two-rowed* barley	U.S. No. 1	--	--	2	136	--	--
	U.S. No. 2	--	--	1	136	1	2,806
	U.S. No. 3	--	--	1	68	--	--
	All lots	--	--	4	340	1	2,806
All Classes	U.S. No. 1	5	1,768	6	816	--	--
	U.S. No. 2	87	1,348,091	117	1,655,475	83	1,086,485
	U.S. No. 3	5	101,582	11	206,433	13	302,757
	U.S. No. 4	--	--	--	--	1	68
	All lots	97	1,451,441	134	1,862,724	97	1,389,310

-- = No lots reported in this category.

* = Factor results for Six-Rowed and Two-Rowed barley are available from FGIS, upon request.

Table 17. Summary of export Barley quality, 1991-93

Factor	Grade	1991					1992					1993			
		Grade	No. of Lmt	No. of Lots	Avg.	Low	High	No. of Lots	Avg.	Low	High	No. of Lots	Avg.	Low	High
Test Weight (lb/bu)	U.S. No. 2	45.0	80	48.7	46.0	51.3	109	49.4	45.4	51.5	76	48.9	46.5	52.0	
	U.S. No. 3	43.0	4	48.8	45.8	51.6	8	51.1	46.0	57.1	11	48.7	46.5	51.3	
	All lots	N/A	84	48.7	45.8	51.6	117	49.6	45.4	57.1	87	48.8	46.5	52.0	
Test Weight (kg/hl)	U.S. No. 2	N/A	80	62.7	59.2	66.1	109	63.6	58.4	66.2	76	62.9	59.9	66.9	
	U.S. No. 3	N/A	4	62.8	58.9	66.5	8	65.7	59.2	73.5	11	62.7	59.9	66.1	
	All lots	N/A	84	62.7	58.9	66.5	117	63.8	58.4	73.5	87	62.9	59.9	66.9	
Moisture	U.S. No. 2	N/A	80	11.7	9.8	13.1	109	12.6	9.9	14.4	76	12.9	9.7	14.1	
	U.S. No. 3	N/A	4	11.2	9.9	12.9	8	11.9	10.5	13.4	11	11.9	9.8	13.9	
	All lots	N/A	84	11.7	9.8	13.1	117	12.5	9.9	14.4	87	12.6	9.7	14.1	
Heat-damaged Kernels	U.S. No. 2	0.3	80	0.0	0.0	0.0	109	0.0	0.0	0.0	76	0.0	0.0	0.0	
	U.S. No. 3	0.5	4	0.0	0.0	0.0	8	0.0	0.0	0.0	11	0.0	0.0	0.0	
	All lots	N/A	84	0.0	0.0	0.0	117	0.0	0.0	0.0	87	0.0	0.0	0.0	
Damaged Kernels (Total)	U.S. No. 2	4.0	80	0.5	0.0	2.0	109	0.9	0.1	3.9	76	0.9	0.0	3.0	
	U.S. No. 3	6.0	4	0.5	0.2	0.8	8	0.4	0.0	1.9	11	0.9	0.1	3.8	
	All lots	N/A	84	0.5	0.0	2.0	117	0.9	0.0	3.9	87	0.9	0.0	3.8	
Foreign Material	U.S. No. 2	2.0	80	0.1	0.0	0.7	109	0.1	0.0	0.5	76	0.2	0.0	1.4	
	U.S. No. 3	3.0	4	0.1	0.0	0.2	8	0.2	0.0	0.2	11	0.1	0.0	0.3	
	All lots	N/A	84	0.1	0.0	0.7	117	0.1	0.0	0.5	87	0.2	0.0	1.4	
Sound Barley	U.S. No. 2	94.0	80	97.8	95.9	99.2	109	97.5	94.4	99.2	76	96.9	94.2	98.4	
	U.S. No. 3	90.0	4	98.0	97.5	98.5	8	97.7	96.1	99.0	11	97.5	94.7	98.9	
	All lots	N/A	84	97.9	95.9	99.2	117	97.6	94.4	99.2	87	97.0	94.2	98.9	
Thin Barley	U.S. No. 2	15.0	80	10.4	5.7	14.9	109	8.4	3.2	14.9	76	7.7	3.9	14.9	
	U.S. No. 3	25.0	4	14.6	5.0	24.7	8	9.5	7.6	12.6	11	9.1	4.4	17.8	
	All lots	N/A	84	10.7	5.0	24.7	117	8.5	3.2	14.9	87	8.0	3.9	17.8	
Broken Kernels	U.S. No. 2	8.0	80	0.7	0.3	2.1	109	0.7	0.3	1.6	76	0.8	0.3	1.7	
	U.S. No. 3	12.0	4	0.5	0.3	0.9	8	0.6	0.3	1.4	11	0.7	0.3	1.1	
	All lots	N/A	84	0.6	0.3	2.1	117	0.7	0.3	1.6	87	0.8	0.3	1.7	
Dockage	U.S. No. 2	N/A	80	1.2	0.3	2.2	109	1.3	0.4	2.7	76	1.4	0.4	2.6	
	U.S. No. 3	N/A	4	1.1	0.3	2.5	8	1.2	0.7	1.9	11	1.2	0.5	1.7	
	All lots	N/A	84	1.2	0.3	2.5	117	1.3	0.4	2.7	87	1.3	0.4	2.6	

N/A = Does not apply.

Table 18. Summary of export Six-rowed barley quality, 1991-93

Factor	Grade	1991					1992				1993			
		Grade No. of Limit	No. of			Avg.	No. of			Avg.	No. of			Avg.
			Lots	Low	High		Lots	Low	High		Lots	Low	High	
Test Weight (lb/bu)	U.S. No. 1	47.0	--	--	--	--	--	--	--	--	--	--	--	--
	U.S. No. 2	45.0	1	51.0	51.0	51.0	--	--	--	--	2	46.3	45.3	47.1
	U.S. No. 3	43.0	--	--	--	--	--	--	--	--	1	53.5	53.5	53.5
	U.S. No. 4	40.0	--	--	--	--	--	--	--	--	--	--	--	--
	All lots	N/A	1	51.0	51.0	51.0	--	--	--	--	3	47.1	45.3	53.5
Test Weight (kg/hl)	U.S. No. 1	N/A	--	--	--	--	--	--	--	--	--	--	--	--
	U.S. No. 2	N/A	1	65.7	65.7	65.7	--	--	--	--	2	59.6	58.4	60.7
	U.S. No. 3	N/A	--	--	--	--	--	--	--	--	1	68.9	68.9	68.9
	U.S. No. 4	N/A	--	--	--	--	--	--	--	--	--	--	--	--
	All lots	N/A	1	65.7	65.7	65.7	--	--	--	--	3	60.7	58.4	68.9
Moisture	U.S. No. 1	N/A	--	--	--	--	--	--	--	--	--	--	--	--
	U.S. No. 2	N/A	1	12.5	12.5	12.5	--	--	--	--	2	13.1	12.9	13.3
	U.S. No. 3	N/A	--	--	--	--	--	--	--	--	1	13.2	13.2	13.2
	U.S. No. 4	N/A	--	--	--	--	--	--	--	--	--	--	--	--
	All lots	N/A	1	12.5	12.5	12.5	--	--	--	--	3	13.1	12.9	13.3
Heat-damaged Kernels	U.S. No. 1	0.2	--	--	--	--	--	--	--	--	--	--	--	--
	U.S. No. 2	0.3	1	0.0	0.0	0.0	--	--	--	--	2	0.0	0.0	0.0
	U.S. No. 3	0.5	--	--	--	--	--	--	--	--	1	0.0	0.0	0.0
	U.S. No. 4	1.0	--	--	--	--	--	--	--	--	--	--	--	--
	All lots	N/A	1	0.0	0.0	0.0	--	--	--	--	3	0.0	0.0	0.0
Damaged Kernels (Total)	U.S. No. 1	2.0	--	--	--	--	--	--	--	--	--	--	--	--
	U.S. No. 2	4.0	1	1.0	1.0	1.0	--	--	--	--	2	0.7	0.5	0.9
	U.S. No. 3	6.0	--	--	--	--	--	--	--	--	1	0.0	0.0	0.0
	U.S. No. 4	8.0	--	--	--	--	--	--	--	--	--	--	--	--
	All lots	N/A	1	1.0	1.0	1.0	--	--	--	--	3	0.6	0.0	0.9
Foreign Material	U.S. No. 1	1.0	--	--	--	--	--	--	--	--	--	--	--	--
	U.S. No. 2	2.0	1	0.1	0.1	0.1	--	--	--	--	2	0.2	0.2	0.2
	U.S. No. 3	3.0	--	--	--	--	--	--	--	--	1	0.0	0.0	0.0
	U.S. No. 4	4.0	--	--	--	--	--	--	--	--	--	--	--	--
	All lots	N/A	1	0.1	0.1	0.1	--	--	--	--	3	0.2	0.0	0.2
Sound Barley	U.S. No. 1	97.0	--	--	--	--	--	--	--	--	--	--	--	--
	U.S. No. 2	94.0	1	97.4	97.4	97.4	--	--	--	--	2	98.7	98.2	99.2
	U.S. No. 3	90.0	--	--	--	--	--	--	--	--	1	99.8	99.8	99.8
	U.S. No. 4	85.0	--	--	--	--	--	--	--	--	--	--	--	--
	All lots	N/A	1	97.4	97.4	97.4	--	--	--	--	3	98.8	98.2	99.8

continued

Table 18. Summary of export Six-rowed barley quality, 1991-93 -- Continued

Factor	Grade	1991					1992				1993			
		Grade No. of Limit	No. of				No. of	No. of			No. of	No. of		
			Lots	Avg.	Low	High		Lots	Avg.	Low		High	Lots	Avg.
Thin Barley	U.S. No. 1	10.0	--	--	--	--	--	--	--	--	--	--	--	--
	U.S. No. 2	15.0	1	10.4	10.4	10.4	--	--	--	--	2	12.1	11.0	13.1
	U.S. No. 3	25.0	--	--	--	--	--	--	--	--	1	0.5	0.5	0.5
	U.S. No. 4	35.0	--	--	--	--	--	--	--	--	--	--	--	--
	All lots	N/A	1	10.4	10.4	10.4	--	--	--	--	3	10.7	0.5	13.1
Broken Kernels	U.S. No. 1	4.0	--	--	--	--	--	--	--	--	--	--	--	--
	U.S. No. 2	8.0	1	0.5	0.5	0.5	--	--	--	--	2	0.4	0.3	0.4
	U.S. No. 3	12.0	--	--	--	--	--	--	--	--	1	0.0	0.0	0.0
	U.S. No. 4	18.0	--	--	--	--	--	--	--	--	--	--	--	--
	All lots	N/A	1	0.5	0.5	0.5	--	--	--	--	3	0.3	0.0	0.4
Dockage	U.S. No. 1	N/A	--	--	--	--	--	--	--	--	--	--	--	--
	U.S. No. 2	N/A	1	1.8	1.8	1.8	--	--	--	--	2	1.0	0.9	1.1
	U.S. No. 3	N/A	--	--	--	--	--	--	--	--	1	0.2	0.2	0.2
	U.S. No. 4	N/A	--	--	--	--	--	--	--	--	--	--	--	--
	All lots	N/A	1	1.8	1.8	1.8	--	--	--	--	3	0.9	0.2	1.1

N/A = Does not apply.

-- = No lots reported in this category.

Sunflower Seeds

Sunflower Seed Grades and Grade Requirements

There are no classes or subclasses in sunflower seed. Sunflower seed is divided into two U.S. numerical grades and U.S. Sample grade. One special grade is provided to emphasize a special condition affecting the value of sunflower seed and is added to and made a part of the grade designation. The special grade does not affect the numerical or Sample grade designation.

U.S. Standards for Sunflower Seeds

Grade	Minimum test weight per bushel (pounds)	Maximum limits of --		
		Damaged Sunflower Seed		Dehulled seed
		Heat damaged (percent)	Total (percent)	
U.S. No. 1	25.0	0.5	5.0	5.0
U.S. No. 2	25.0	1.0	10.0	5.0
U.S. Sample Grade				

U.S. Sample grade is sunflower seed that:

- Does not meet the requirements for the grades U.S. Nos. 1 or 2; or
- Contains 8 or more stones which have an aggregate weight in excess of 0.20 percent of the sample weight, 2 or more pieces of glass, 3 or more crotalaria seeds (*Crotalaria* spp.), 2 or more castor beans (*Ricinus communis* L.), 4 or more particles of an unknown foreign substance(s), or a commonly recognized harmful or toxic substance(s), 10 or more rodent pellets, bird droppings, or equivalent quantity of other animal filth per 600 grams of sunflower seed; or
- Has a musty, sour or commercially objectionable foreign odor; or
- Is heating or otherwise of distinctly low quality.

Definitions

Test weight (lb/bu) is pounds of grain per Winchester bushel.

Test weight (kg/hl) is the metric system equivalent to pounds per bushel. Kilograms per hectoliter are calculated by multiplying pounds per bushel by 1.287.

Heat-damaged sunflower seeds are seeds and pieces of sunflower seed that are materially discolored and damaged by heat.

Damaged sunflower seed is seed and pieces of sunflower seed that are badly ground-damaged, badly weather-damaged, diseased, frost-damaged, heat-damaged, mold-damaged, sprout-damaged, or otherwise materially damaged.

Dehulled seed is sunflower seed that has the hull completely removed from the sunflower kernel.

Foreign material is all matter other than whole sunflower seeds containing kernels that can be removed from the original sample by use of an approved device and by handpicking a portion of the sample.

Admixture consists of all material other than sunflower seed which can be removed from a test portion by handsieving and handpicking. Empty hulls and parts of seed are considered sunflower seed.

Moisture is the water content of grain as determined by an approved electronic moisture meter. The percentage of moisture in a sample does not affect the numerical grade.

Table 19. U.S. Sunflower Seed Exports: Number of lots and quantity exported by class and grade, 1991-93

	1991		1992		1993	
	Number of Lots	Metric Tons	Number of Lots	Metric Tons	Number of Lots	Metric Tons
U.S. No. 1	3	17,815	--	--	--	--
U.S. No. 2	2	14,814	--	--	--	--
All lots	5	32,629	--	--	--	--

-- = No lots reported in this category.

Table 20. Summary of export Sunflower Seed quality, 1991-93

Factor	Grade	1991					1992				1993			
		Grade No. of	No. of				No. of				No. of			
		Limit	Lots	Avg.	Low	High	Lots	Avg.	Low	High	Lots	Avg.	Low	High
Test Weight (lb/bu)	U.S. No. 1	25.0	2	29.6	29.6	29.7	--	--	--	--	--	--	--	--
	U.S. No. 2	25.0	2	29.0	29.0	29.1	--	--	--	--	--	--	--	--
	All lots	N/A	4	29.3	29.0	29.7	--	--	--	--	--	--	--	--
Test Weight (kg/hl)	U.S. No. 1	N/A	2	38.1	38.0	38.2	--	--	--	--	--	--	--	--
	U.S. No. 2	N/A	2	37.3	37.3	37.4	--	--	--	--	--	--	--	--
	All lots	N/A	4	37.7	37.3	38.2	--	--	--	--	--	--	--	--
Moisture	U.S. No. 1	N/A	2	9.1	9.0	9.1	--	--	--	--	--	--	--	--
	U.S. No. 2	N/A	2	8.8	8.5	9.2	--	--	--	--	--	--	--	--
	All lots	N/A	4	8.9	8.5	9.2	--	--	--	--	--	--	--	--
Heat-damaged Sunflower Seed	U.S. No. 1	0.5	2	0.0	0.0	0.0	--	--	--	--	--	--	--	--
	U.S. No. 2	1.0	2	0.0	0.0	0.0	--	--	--	--	--	--	--	--
	All lots	N/A	4	0.0	0.0	0.0	--	--	--	--	--	--	--	--
Damaged Sunflower Seed (Total)	U.S. No. 1	5.0	2	0.0	0.0	0.0	--	--	--	--	--	--	--	--
	U.S. No. 2	10.0	2	0.0	0.0	0.1	--	--	--	--	--	--	--	--
	All lots	N/A	4	0.0	0.0	0.1	--	--	--	--	--	--	--	--
Foreign Material	U.S. No. 1	N/A	2	3.8	3.5	3.9	--	--	--	--	--	--	--	--
	U.S. No. 2	N/A	2	3.8	3.8	3.9	--	--	--	--	--	--	--	--
	All lots	N/A	4	3.8	3.5	3.9	--	--	--	--	--	--	--	--
Dehulled Seed	U.S. No. 1	5.0	2	1.1	1.0	1.3	--	--	--	--	--	--	--	--
	U.S. No. 2	5.0	2	0.8	0.7	0.9	--	--	--	--	--	--	--	--
	All lots	N/A	4	1.0	0.7	1.3	--	--	--	--	--	--	--	--
Admixture	U.S. No. 1	N/A	2	3.2	2.7	3.4	--	--	--	--	--	--	--	--
	U.S. No. 2	N/A	2	3.4	3.4	3.4	--	--	--	--	--	--	--	--
	All lots	N/A	4	3.3	2.7	3.4	--	--	--	--	--	--	--	--

N/A = Does not apply.

-- = No lots reported in this category.

Oats

Oat Grades and Grade Requirements

There are no classes or subclasses in oats. Oats are divided into four numerical grades and U.S. Sample grade. Special grades are provided to emphasize special qualities or

conditions affecting the value of the oats and are added to and made a part of the grade designation. Special grades do not affect the numerical or Sample grade designation.

U.S. Standards for Oats

Grade	Minimum limits of -		Maximum limits of -		
	Test weight per bushel (pounds)	Sound Oats (percent)	Heat damaged kernels (percent)	Foreign material (percent)	Wild oats (percent)
U.S. No. 1	36.0	97.0	0.1	2.0	2.0
U.S. No. 2	33.0	94.0	0.3	3.0	3.0
U.S. No. 3 ¹	30.0	90.0	1.0	4.0	5.0
U.S. No. 4 ²	27.0	80.0	3.0	5.0	10.0

U.S. Sample grade are oats which:

- Do not meet the requirements for the grades U.S. Nos. 1, 2, 3, or 4; or
- Contain 8 or more stones which have an aggregate weight in excess of 0.2 percent of the sample weight, 2 or more pieces of glass, 3 or more crotalaria seeds (*Crotalaria* spp.), 2 or more castor beans (*Ricinus communis* L.) 4 or more particles of an unknown foreign substance(s) or a commonly recognized harmful or toxic foreign substance(s), 8 or more cocklebur (*Xanthium* spp.) or similar seeds singly or in combination, 10 or more rodent pellets, bird droppings, or an equivalent quantity of other animal filth per 1-1/8 to 1-1/4 quarts of oats; or
- Have a musty, sour, or commercially objectionable foreign odor (except smut or garlic odor); or
- Are heating or otherwise of distinctly low quality.

¹ Oats that are slightly weathered shall be graded not higher than U.S. No. 3.

² Oats that are badly stained or materially weathered shall be graded not higher than U.S. No. 4.

Oats

Definitions

Test weight (lb/bu) is pounds of grain per Winchester bushel.

Test weight (kg/hl) is the metric system equivalent to pounds per bushel. Kilograms per hectoliter are calculated by multiplying pounds per bushel by 1.287.

Heat-damaged kernels are kernels and pieces of oat kernels, other grains, and wild oats that are materially discolored and damaged by heat.

Foreign material is all matter other than oats, wild oats, and other grains.

Fine seeds are all matter that passes through a 5/64 triangular-hole sieve.

Sound oats are kernels and pieces of oat kernels (except wild oats) that are not badly ground-damaged, badly weather-damaged, diseased, frost-damaged, germ-damaged, heat-damaged, insect-bored, mold-damaged, sprout-damaged, or otherwise materially damaged.

Wild oats are seeds of *Avena fatua* L. and *A. sterilis* L.

Moisture is the water content of grain as determined by an approved electronic moisture meter. The percentage of moisture in a sample does not affect the numerical grade.

Table 21. U.S. Oats Exports: Number of lots and quantity exported by class and grade, 1991-93

Class	1991		1992		1993	
	Number of Lots	Metric Tons	Number of Lots	Metric Tons	Number of Lots	Metric Tons
U.S. No. 1	1	689	63	30,475	45	17,126
U.S. No. 2	2	382	27	3,336	18	2,538
All lots	3	1,071	90	33,811	63	19,664

Canola

Canola Grades and Grade Requirements

There are no classes of canola. Canola is divided into three numerical grades and U.S. Sample grade. Special grades are provided to emphasize special qualities or conditions

affecting the value, and are added to and made a part of the grade designation. They do not affect the numerical or sample grade designation.

U.S. Standards for Canola

Grade	Maximum percent limits of --								Maximum count limits of --		
	Damaged Kernels			Conspicuous Admixture				Inconspicuous Admixture	Other material		
	Heat damaged (percent)	Distinctly green (percent)	Total (percent)	Ergot (percent)	Sclerotinia (percent)	Stones (percent)	Total (percent)		Animal Filth	Glass	Unknown Foreign Substance
U.S. No. 1	0.1	2.0	3.0	0.05	0.05	0.05	1.0	5.0	3	0	1
U.S. No. 2	0.5	6.0	10.0	0.05	0.10	0.05	1.5	5.0	3	0	1
U.S. No. 3	2.0	20.0	20.0	0.05	0.15	0.05	2.0	5.0	3	0	1
U.S. Sample Grade											

U.S. Sample grade is canola that:

- (a) Does not meet the requirements for U.S. Nos. 1, 2, or 3; or
- (b) Has a musty, sour, or commercially objectionable foreign odor; or
- (c) Is heating or otherwise of distinctly low quality.

Definitions

Conspicuous admixture is all matter other than canola including, but not limited to, ergot, sclerotinia, and stones, which is conspicuous and readily distinguishable from canola and which remains in the sample after the removal of machine separated dockage. Conspicuous admixture is added to machine separated dockage in the computation of total dockage.

Damaged kernels are canola and pieces of canola that are heat-damaged, sprout-damaged, mold-damaged, distinctly green-damaged, frost-damaged, rime-damaged, or otherwise materially damaged.

Distinctly green kernels are canola and pieces of canola which, after being crushed, exhibit a distinctly green color.

Dockage is all matter other than canola that can be removed from the original sample by use of an approved device according to procedures described in FGIS instructions. Also, underdeveloped, shriveled, and small pieces of canola kernels that cannot be recovered by properly screening or recleaning. Machine separated dockage is added to conspicuous admixture in the computation of total dockage.

Ergot is sclerotia of the fungus, *Claviceps* species, which are associated with some seeds other than canola where the fungal organism has replaced the seed.

Heat-damaged kernels are canola and pieces of canola which, after being crushed, exhibit that they are discolored and damaged by heat.

Inconspicuous admixture is any seed which is difficult to distinguish from canola. This includes, but is not limited to, common wild mustard (*Brassica kaber* and *B. juncea*), domestic brown mustard (*Brassica juncea*), yellow mustard (*B. hirta*), and seed other than the mustard group.

Sclerotia are dark colored or black resting bodies of the *Sclerotinia* and *Claviceps*.

Sclerotinia is the genus name which includes the fungus *Sclerotinia sclerotiorum* which produces sclerotia. Canola is only infrequently infected, and the sclerotia, unlike sclerotia of ergot, are usually associated with the stem of the plants.

Table 22. U.S. Canola Exports: Number of lots and quantity exported by class and grade, 1991-93

	1991		1992		1993	
	Number of Lots	Metric Tons	Number of Lots	Metric Tons	Number of Lots	Metric Tons
U.S. No. 1	--	--	1	11,259	2	12,066
U.S. No. 2	--	--	--	--	1	3,131
All lots	--	--	1	11,259	3	15,197

-- = No lots reported in this category.

Table 23. Summary of export Canola quality, 1991-93

Factor	Grade	1991					1992					1993			
		Grade No. of Limit	No. of				No. of	No. of			No. of	No. of			No. of
			Lots	Avg.	Low	High		Lots	Avg.	Low	High	Lots	Avg.	Low	High
Dockage	U.S. No. 1	N/A	--	--	--	--	2	2.7	2.3	3.1	2	2.4	2.1	2.7	
	U.S. No. 2	N/A	--	--	--	--	--	--	--	--	1	1.9	1.9	1.9	
	All lots	N/A	--	--	--	--	2	2.7	2.3	3.1	3	2.2	1.9	2.7	
Moisture	U.S. No. 1	N/A	--	--	--	--	1	7.6	7.6	7.6	1	7.7	7.7	7.7	
	U.S. No. 2	N/A	--	--	--	--	--	--	--	--	--	--	--	--	
	All lots	N/A	--	--	--	--	1	7.6	7.6	7.6	1	7.7	7.7	7.7	
Heat damaged kernels	U.S. No. 1	0.1	--	--	--	--	2	0.0	0.0	0.0	2	0.0	0.0	0.0	
	U.S. No. 2	0.5	--	--	--	--	--	--	--	--	1	0.0	0.0	0.0	
	All lots	N/A	--	--	--	--	2	0.0	0.0	0.0	3	0.0	0.0	0.0	
Distinctly green kernels	U.S. No. 1	2.0	--	--	--	--	2	0.3	0.0	0.6	2	0.8	0.1	1.5	
	U.S. No. 2	6.0	--	--	--	--	--	--	--	--	1	2.3	2.3	2.3	
	All lots	N/A	--	--	--	--	2	0.3	0.0	0.6	3	1.3	0.1	2.3	
Total damaged kernels	U.S. No. 1	3.0	--	--	--	--	2	0.5	0.4	0.6	2	1.6	0.8	2.3	
	U.S. No. 2	10.0	--	--	--	--	--	--	--	--	1	2.7	2.7	2.7	
	All lots	N/A	--	--	--	--	2	0.5	0.4	0.6	3	1.9	0.8	2.7	
Ergot	U.S. No. 1	0.05	--	--	--	--	2	0.0	0.0	0.0	2	0.0	0.0	0.0	
	U.S. No. 2	0.05	--	--	--	--	--	--	--	--	1	0.0	0.0	0.0	
	All lots	N/A	--	--	--	--	2	0.0	0.0	0.0	3	0.0	0.0	0.0	
Sclerotinia	U.S. No. 1	0.05	--	--	--	--	2	0.0	0.0	0.0	2	0.0	0.0	0.0	
	U.S. No. 2	0.1	--	--	--	--	--	--	--	--	1	0.0	0.0	0.0	
	All lots	N/A	--	--	--	--	2	0.0	0.0	0.0	3	0.0	0.0	0.0	
Stones	U.S. No. 1	0.05	--	--	--	--	2	0.0	0.0	0.0	2	0.0	0.0	0.0	
	U.S. No. 2	0.05	--	--	--	--	--	--	--	--	1	0.0	0.0	0.0	
	All lots	N/A	--	--	--	--	2	0.0	0.0	0.0	3	0.0	0.0	0.0	
Total conspicuous admixture	U.S. No. 1	1.0	--	--	--	--	2	0.3	0.1	0.4	2	0.4	0.3	0.4	
	U.S. No. 2	1.5	--	--	--	--	--	--	--	--	1	0.3	0.3	0.3	
	All lots	N/A	--	--	--	--	2	0.3	0.1	0.4	3	0.3	0.3	0.4	
Inconspicuous admixture	U.S. No. 1	5.0	--	--	--	--	2	0.1	0.0	0.2	2	0.0	0.0	0.0	
	U.S. No. 2	5.0	--	--	--	--	--	--	--	--	1	0.0	0.0	0.0	
	All lots	N/A	--	--	--	--	2	0.1	0.0	0.2	3	0.0	0.0	0.0	

N/A = Does not apply.

-- = No lots reported in this category.

Mixed Grain

Mixed grain is any mixture of grains for which standards have been established under the United States Grain Standards Act, provided that such mixture does not come within the requirements of any of the standards for such grains; and that such mixture consists of 50 percent or

more of whole kernels of grain and/or whole or broken soybeans which will not pass through a 5/64-inch triangular-hole sieve and/or whole canola and/or whole flaxseed that passes through such a sieve after sieving according to procedures prescribed in FGIS instructions.

Mixed Grain Grades and Grade Requirements

Mixed grain with not more than 10.0 percent moisture, 15.0 percent of damaged kernels, and not more than 3.0 percent of the heat-damaged kernels, and that otherwise does not meet the requirements for the grade U.S. Sample grade Mixed Grain.

U.S. Sample grade Mixed Grain:

- a. Does not meet the requirements for the grade U.S Mixed Grain; or
- b. Contains more than 16.0 percent moisture; or
- c. Contains 8 or more stones that have an aggregate weight in excess of 0.2 percent of the sample weight, 2 or more pieces of glass, 3 or more *Crotalaria* seeds (*Crotalaria* spp.), 2 or more castor beans (*Ricinus communis* L.), 8 or more cockleburs (*Xanthium* spp.) or unknown foreign substance(s) or a recognized harmful or toxic substance(s), 10 or more rodent pellets, bird droppings, or an equivalent quantity of other animal filth under 1,000 grains of mixed grain; or
- d. Is musty, sour, or heating; or
- e. Has any commercially objectionable foreign odor except smut or garlic; or
- f. Is otherwise of distinctly low quality.

Mixed Grain Special Grades and Special Grade Requirements

- a. Blighted mixed grain is mixed grain in which barley predominates and that contains more than 4.0 percent of fungus-damaged and/or mold-damaged barley kernels.
- b. Ergoty mixed grain is:
 - i. Mixed grain in which rye or wheat predominates and that contains more than 0.30 percent ergot, or
 - ii. Any other mixed grain that contains more than 0.10 percent ergot.
- c. Garlicky mixed grain is:
 - i. Mixed grain in which wheat, rye, or triticale predominates, and that contains 2 or more green garlic bulblets, or an equivalent quantity of dry or partly dry bulblets in 1,000 grams of mixed grain; or
 - ii. Any other mixed grain that contains 4 or more green garlic bulblets, or an equivalent quantity of dry or partly dry bulblets, in 500 grams of mixed grain.
- d. Smutty mixed grain is:
 - i. Mixed grain in which rye, triticale, or wheat predominates, and that contains 15 or more average size smut balls, or an equivalent quantity of smut spores in 250 grams of mixed grain, or
 - ii. Any other mixed grain that has the kernels covered with smut spores to give a smutty appearance in mass, or that contains more than 0.2 percent smut balls.
- e. Treated mixed grain is mixed grain that has been scoured, limed, washed, sulfured, or treated in such a manner that its true quality is not reflected by the grade designation U.S Mixed Grain or U.S. Sample grade Mixed Grain.

Mixed Grain

Definitions

Damaged kernels are kernels and pieces of grain kernels for which standards have been established under the Act, that are badly ground-damaged, badly weather-damaged, diseased, frost-damaged, germ-damaged, heat-damaged, insect-bored, mold-damaged, sprout-damaged, or otherwise materially damaged.

Foreign material and fines are all matter other than whole flaxseed that passes through a 5/64-inch triangular-hole sieve, and all matter other than grains for which standards have been established under the Act, that remains in the sieved sample.

Grades of mixed grain are U.S. Mixed Grain, U.S. Sample grade Mixed Grain, and special grades.

Heat-damaged kernels are kernels and pieces of grain kernels for which standards have been established under the Act, that are materially discolored by damaged by heat.

Sieve (5/64-inch triangular-hole sieve) is a metal sieve 0.032 inch thick with equilateral triangular perforations in the inscribed circles which are 0.0781 (5/64) inch in diameter.

Table 24. U.S. Mixed Grain Exports: Number of lots and quantity exported, 1991-93

Class	1991		1992		1993	
	Number of Lots	Metric Tons	Number of Lots	Metric Tons	Number of Lots	Metric Tons
All lots	--	--	43	252,100	--	--

-- = No lots reported in this category.

Average factor results are not listed for the mixed grain lots since the factors apply to the grain as a mixture and not to the individual component grains in the mixture. Quality results are available for individual lots, upon request.

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